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PAINTED FOR  
JAMES VICK,

DOUBLE DAHLIAS.

FORBES CO. BOSTON & N.Y.



DECEMBER, 1884.

THE GAIN AND LOSS for the past year of those of us engaged in horticultural pursuits may soon be determined, and at this time we may profitably review, in a cursory manner, some of the principal features of the last twelve months as they have appeared to us from our standpoint, hoping thereby more justly to appreciate our gains and depreciate our losses, or, if possible, to make even our failures helps to future success. The weather, to the horticulturist, is always a subject of interest, and in no part of the country has this interest been lacking; in fact, the meteorological occurrences of the past year have been unusual and often surprising. In October of last year commenced the exhibition of a most remarkable atmospheric phenomenon, popularly known as the "red lights." Since that time the "red lights" have made their appearance a great number of times, at varied intervals, and have been witnessed in all parts of the world, and are familiar to all observers. When witnessed, the red lights are seen immediately after sunset, illuminating the whole western sky, spreading well to the north, and often far around on the southern border, and extending high upwards. The shade of color varies from a deep, glowing crimson to a rosy tint; at such times it is also seen in the morning, immediately before sunrise, but the colors are then usually

weaker than at evening. The cause of this peculiar phenomenon has been the subject of a great amount of speculation, and a number of theories have been proposed with a singular lack of facts on which to base them, and it is unnecessary to say that they find no general acceptance. But our readers have already been informed that careful observation has perceived that the red lights are connected with the appearance of sun-spots, and we can now inform them that every case of the red lights has been in connection with the occurrence of great sun-spots or great movements and changes in these spots. Thus, the ultimate cause of this phenomenon is the agitation of the matter on the surface of the sun, or immediately surrounding it. The intermediate causes are not yet so definitely determined, but the phenomenon is undoubtedly one of refraction in the upper atmosphere, probably due to the presence of vapor produced by electrical action.

The winter and spring months of this year were characterized by great extremes of temperature. Much of the heat was above the ordinary range, but there were frequent cold reactions, when the temperature descended very low; this condition prevailed over the whole continent, and untimely frosts did great damage to vegetation, even in many parts of the far South. The West suffered se-

verely, and small-fruit plantations, vineyards and Peach and Apple orchards were badly injured. In the favored lower lake region, and along the Atlantic coast States the fluctuations of temperature during the winter were within narrower limits, and in those localities little damage occurred, and in early spring fruit growers there looked forward with buoyant hopes. There was yet, however, a critical period to pass, that of the blooming season, and the fitful and changeable character of the weather inspired many with misgivings in regard to it. May came, and with it the blossoms. In all the north-eastern part of the country the promise of fruit was never finer. With the exception of Peaches in some locations, all kinds of fruit-bearing plants appeared to be ready to yield abundantly. The orchards were covered with bloom, the fields of Strawberries and other small fruits were sheets of snowy white; a few days more and the safety of the fruit crops would be almost assured. Such was the condition on the 28th of last May; on the morning of the 29th a great change had occurred, and reports came by telegraph of damage by frost in nearly all the Northern States; the next night occurred another frost doing still further damage. The hopes of great numbers of fruit growers were destroyed. But the damage was not total, in nearly all parts visited by these frosts there were particular localities that were exempt from injury, and valuable crops of fruit were set and arrived at maturity, and have been marketed at fair prices. These frosts have made apparent the fact that slight differences in location materially affect the value of lands for fruit raising, which are otherwise equally valuable. In some cases the causes that operate to prevent frosts in some localities and to allow them in others are not apparent, but the reports of all observers agree that the higher lands were more exempt from injury than the lower, other conditions being the same, and this conclusion is in accordance with a judgment arrived at long before on this subject, and which it is well for fruit-growers of this time to have corroborated again in this emphatic manner.

Many of the Strawberry growers in Illinois lost nearly all their crops. Straw-

berries were a partial failure in the Eastern States; there was a scanty crop of all small fruits at the east, and but few Cherries, and this was also the case at the west. Michigan, favored by the influence of the surrounding waters had a fair crop of the small fruits and a moderate crop of Apples; Illinois and Missouri produced but few Apples. The Apple crop in the eastern portion of this State and New England is quite small; in Western New York, Pennsylvania and parts of Ohio it is fair. The Peach crop of Maryland and Delaware was probably a good one; on the Hudson River it was quite destroyed. The Grape crop of the whole country was far below the usual average, but generally matured well. Fruit of most kinds has brought fair prices, the exceptions to this statement in this part of the country being Cherries, that scarcely found buyers at three cents a pound, and Apples at ninety cents to a dollar and thirty cents a barrel, package included. With a full crop of fruit in all parts of the country, it looks as if the margin of profit to the fruit grower would vanish, but such a condition, though possible, is not apt to occur often. The yield of Oranges is said to be large, but with a short supply generally of other fruits, they will all be needed, and will undoubtedly bring remunerative prices.

Thus, in a year with many unfavorable phases of weather, the fruit production in some parts has been good, in others fair, and in others extremely poor. If the weather with which we have been visited for the past three seasons should continue the business of the fruit grower would unquestionably be a precarious one; only in a very few favored spots would it be sufficiently reliable to encourage him in heavy outlays. A succession of seasons unfavorable to fruit growing generally, such as we have now experienced, is something before unknown in this country. In seeking a cause for this unusual state of the weather there is no doubt that we find it in the peculiar agitation of the solar surface. We have mentioned the red lights as connected with the solar eruptions, but the evidence is abundant and conclusive that the destructive tornados, or cyclones, which for the past two years have visited us, the frequent outbursts of heat and the consequent cold reactions, and other

phenomena which need not be mentioned here, are concurrent with the same solar actions and displays. It is well known that the occurrences of numerous sun-spots follow a law of periodicity, the complete cycle being an average period between eleven and twelve years in length, subject, however, to variations of one to three years, or even more, and there are also some data for the conclusion that once in about fifty years the solar agitation is extreme. Through such a period of disturbance we are now passing, and with the abatement of the solar action we may expect the return of seasons to normal regularity. The trials, therefore, which fruit growers have borne for the last few years are the extreme ones, and the varieties of fruits that have stood the tests during this time may very properly be considered as "ironclads;" and the localities that have been found best adapted to fruit raising under all the disadvantages of late years will have a record that will maintain their value above that of other places.

The season of 1882 was probably the worst ever known for the agricultural crops of this country; the present season has been an improvement upon the last with both farm and fruit crops, and we think it a well grounded hope that the coming one will be still more favorable.

Amateur gardeners, those who devote themselves to horticultural pursuits for pleasure, for the love of gardening, have no doubt enjoyed their work and its results despite the weather, whatever it may have been; what we labor for in love is always precious; our garden treasures secured by our own care and toil possess a value that cannot be measured by silver and gold. We have worked with nature in molding sunshine, dew and shower into forms of grace and beauty, and morsels of delicious taste that might serve a banquet of the gods, and we have built up the sunshine and the pure air into our own frames, mingled them through our blood until a new life has animated us and new thoughts and hopes inspired our minds. We know this to be gain beyond dispute.

One great need of amateur horticulturists in this country is organization. Nothing would do more to promote their interests than forming themselves into

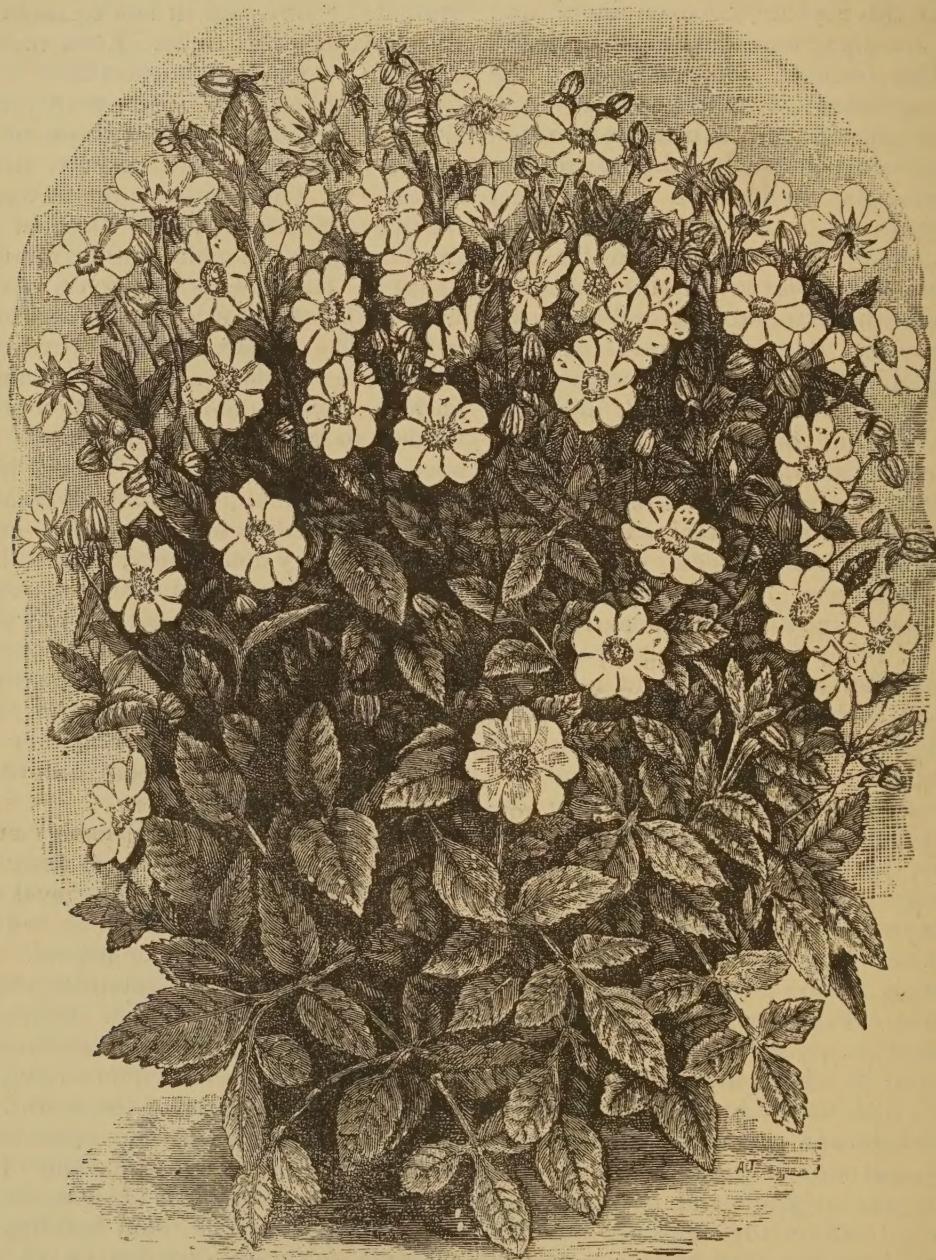
societies. Our great agricultural societies, with their annual fairs, do little or nothing to foster horticulture among the people, nor, perhaps, is it possible that they should; at present the existence of many of these societies appears to depend, in a great measure, upon the revenue they receive for the use of their grounds by silly, and in some cases even demoralizing side shows. Even most of the well established horticultural societies regard more the interests of professional horticulturists than those of the private individual, and perhaps this is necessary. The remedy is the formation of village societies, where those of kindred interests can unite and be mutually helpful. The details of such a society were well outlined in a pleasant article entitled "*The Garden Society*," by SUSAN POWER, in our May number. We have at various times called the attention of our readers to this subject, and we know that societies of this character would be of great benefit and pleasure. The readers of this publication are the proper ones to move in every community, and actively engage in the formation of such societies; it is not necessary to wait for any great number; let even two or three persons meet together with the determination to entertain and instruct each other about plants and garden work, and they will soon find their numbers increase, the interest will be a growing one.

Those who visit New Orleans this winter will probably be able to witness one of the finest exhibits of horticultural objects ever made in this country, at least, we are now so assured by the managers. The World's Industrial and Cotton Exposition is to open there on the first Monday of December. The principal industries of both North and South America and Europe, and other parts of the world, will there be represented. Our space does not admit of any lengthy account of the arrangements that have been made, but they are ample. The main building occupies a space of 1378 feet by 905 feet; the building for the United States and State exhibits is 885 feet by 565 feet; the Art Gallery is 500 feet by 100 feet; and Horticultural Hall is 600 feet by 194 feet. A great treat is no doubt in store for those having the opportunity to examine at their leisure the immense display that will be there offered.

## DAHLIAS.

Our colored plate, this month, showing a group of double Dahlias, is one to which the artists have not done full justice. The upper flower is intended to represent the variety named James Vick,

It is a most admirable variety and will not fail to satisfy the most fastidious critic. All of the varieties are drawn to a scale about two-thirds of the natural size. Amazon, yellow with a scarlet edge, is very showy and striking, and Empress Maud. edged with purple or pur-



WHITE QUEEN DAHLIA.

and which was originated a few years since in England, by KEYNES & CO., the celebrated Dahlia growers. The flower is very compact and symmetrical, and in these respects, and also in color, the plate does not equal the original ; the color is a purplish maroon, very rich and intense.

plish crimson, is of fine form and effect. Among single Dahlias one of the finest white varieties is White Queen, here illustrated. The plant grows to a height of three feet or a little more, and forms a compact bush, bearing its finely formed white flowers in great profusion.



## CORRESPONDENCE.

### A CALIFORNIAN OUTING.

HANS STIFFLER was going up City Creek Canon for a couple of day's fishing and sport, and I made up my mind I would go with him; so, with knapsack on my back and gun under my arm, I walked over to HANS' place, one hot day in September, in time to jump into the wagon in which we were to make the first stage of the journey. In my knapsack were packed two day's provisions, powder and shot, one blanket and a heavy great-coat, and I can tell you I was glad to fling it into the bottom of the wagon. HANS had his blankets and great-coat, and as his son, ANDY, a boy of twelve years, begged to come along, we had quite an accession to the baggage and eatables. We soon started up grade from the valley, noting the varied care and commensurate success of the orchards on either hand. As I said before, the day was excessively hot, not a cloud broke the blue expanse of sky. The turkey buzzard wheeled and circled over head, while lower down the hen hawk chased the meadow lark and finches. Here we leave the cultivated land and cross a tract of adobe and stony land, that has not yet been cleaned and subdued. Hold tight! and put the break on; down we go into the bed of the creek. Here is chaos over again, huge boulders of granite, marble and conglomerate lie in sweet confusion, as if the world had been made here, and these were the pieces left. The bed here is about a quarter of a mile across, and just in the center is a small purling stream, of which not one drop reaches my ranch, about four miles below this point. How the Alder and Willow luxuriate here! See the growth on that Willow; it must be fifteen feet for this year's growth, and an inch and a half in

diameter at the base. Ha! see that cowardly cayote, skulking amongst the bushes; to-night he will be making his hideous din near our hen-houses, and only for our good dog, Rover, we would soon have no chickens. Here's a pretty go; HANS has missed the way, and we hasten to retrace our steps, nearly a mile, and go up by RANDALL'S Ranch and the bee man's, and so on to the Democrats, where we must leave the wagon.

Now we have left civilization; up starts a covey of beautiful mountain quail, but my gun is not loaded and so they escape. Look at those beautiful little warblers, scarcely larger than humming birds, flitting about from weed to weed, ever and anon bursting into glad trills of song. Here is old AVERILL'S place. The old man must have been slightly gone when he took up land here; where is he going to get water? echo answers, where. There is a spring, enough for household purposes, but none left for irrigating, and even if there were, as it is forty feet below the level of his land, he would require an engine or ram before he could utilize it; as it is, I wouldn't give him twenty-five cents an acre for it.

Now, turn, and look around you. To the southeast, and about on a level with us, are Lagonia, Crafton, and Redlands; directly south, the lower Highlands and old San Bernardino; behind them towers the San Jacinto range, and to the east, with the snow of centuries on his head, is the mighty San Jacinto himself; in the northeast rise the mighty peaks of the San Bernardino, while the Santa Ana winds its sinuous course through the valley at our feet. Away to the southwest is the grey range of the Temescal Mountains; nearer still the foothills, behind and amongst which are the far-famed or-

chards of Riverside ; nearer still are Colton and San Bernardino, the roofs of which we can see nestling amongst the green ; then, away to the west, yonder, we can see where Etwanda, Ontario and Cacamonga lie at the base of the range of the Cacamonga Mountains. Really, it is a wonderful and goodly sight, and to know that all this land will soon be producing thousands of tons of fruit to bless the suffering humanity of our teeming cities is a goodly thought.

But now, as our horses have had a feed, we had better go on, as we have a long stage before camping. I propose to walk the first stage, so I shoulder my knapsack, and start down grade to the bottom of the canon ; the path is steep, and as I go down my steps get longer and quicker, until, at last, whether I will or no, I break into a run, and almost run into the rushing creek at the bottom. Here is the ditch of the Highland Orange Association ; what a stupendous undertaking ! See where they have blasted the rock and taken it up the side of the hill. Every one who comes to this country ought, before looking after land, to see just such a ditch, and it would give him a good idea of the value of water. There is a ditch built of stone and cement and carried over a mile, a great part of the way every foot blasted, and one hill tunneled through, and all to supply two or three hundred acres of land with water. It brings to my mind a piece of advice I got from an old settler : "Never mind the land, look after the water."

Now I am in for it ; I must cross the creek. There is a good ford for horses, but I am not a horse, and I fain would believe not an ass ; my knapsack weighs about forty pounds, my gun about five more, and the stones look slippery and smooth and few and far between. How the water roars and rushes along, and standing still, listening to it, only makes me more timid and fearful. Well, here goes ; so with a light, quick spring from shore to shore, I reach the other side in safety, when, lo and behold, I have not gone a dozen yards before I must perform the same feat over again, and so on ; the trail keeps crossing the creek as the canon is very narrow, and before I have crossed half a dozen times my baggage begins to get very heavy, and the

path rougher at every step. Here the canon narrows so that there is barely room for the pack trail at the side of the creek, crossing continually as the stream makes either side too narrow for the trail, till, at last, just ahead of me, I seem shut in between two great pillars of granite and a rushing stream, while the Alders around me tower up as high and straight and slender as Larches. But what have we here ? As I live, the whole base of the rocks is covered with Adiantum, or Maidenhair Fern ! Down goes my knapsack with a thump, and while I am reveling amongst the beautiful fronds, I am tired no longer. I remember no more the roughness of the way. This is ample compensation for harder labor than creek crossing. Which one is it ? It is larger in the pinnae than cuneatum, and more divided. I think it must be A. Feeii. How grand it is to see so many square yards of these beautiful, delicate fronds waving in the slight breeze ; and here, higher up, is my old acquaintance, Polypodium vulgare, while higher still floats the streamer-like branches of the Wild vine and Virginia Creeper.

See how the sun chequers with golden light the leaves and rocks high overhead, and how deliciously cool and shady it is down here ; look at the harmonious coloring of that purple emperor butterfly, purple, black, orange, vermillion and white, and here is half a score of the ocellated-brown butterfly, flitting in the flecks of sunshine, and sailing majestically along comes the glorious papillio machaon, with its yellow and black barred swallow-tailed wings.

"Get up, Jim ! go along with you," and I am suddenly aware the pack horses have overtaken me, and bring me to the stern reality of crossing the creek again, and this time I must cross on the thin, slippery trunk of an Alder tree thrown over the stream, and that, too, about three feet above the surging water below. No help for it ; I must cross, or else get into the stream and wade up, and so I start on my rope-walking trip with inward misgivings, which, alas, were soon realized, for, just as I get into the center the trunk turns over, and down I go ; as I slip I fling my knapsack to the side, and try for a stone, but in I go up to the knees and scramble to the side, HANS STIFFLER and ANDY, with broad grins

on their faces, watching me. Now we exchange; I take the saddle and HANS shoulders my knapsack and gun, and really I don't know which has the best of it; behind my saddle is tied a great roll of blankets and coats, a frying pan dangles down my right leg, while in front of me I carry a huge portmanteau filled with eatables, a kettle, and tin cans to drink from.

Here the canon widens, and we go up a steep incline out of the creek bed. Here huge fronds of *Pteris Aquilina* and *Lastrea* attract my attention at the base of the over-hanging rocks, while among the debris the trail goes through I see the familiar faces of the Golden-rod, Michaelmas Daisy, the Wild vine, and Poison Currant, and a few wild Blackberry canes, while far above us are the Yucca, Live Oak, and Juniper, growing in the fissures of the rocks. I began to think we should have a good trail, when the canon abruptly closes again and plunge we go, a bough of Alder catching me by the neck and nearly drags me backwards into the water; I manage to free my head just as Jim plunges into a hole, almost sending me over his head. Now it becomes so narrow that we have to ford up stream, the rocks on either side clothed with *Adiantum* in lavish profusion. Now it widens again, but the trail is steep. I get off and lead Jim up, ANDY following on Broncho. Something startles him, he throws his head up and over he goes backwards, and fortunate it was for ANDY that he slipped off sideways into the Wild vines or he certainly would have been killed. Broncho soon rights himself, and we lead him to the top where ANDY, nothing daunted, mounts again. Here are the *Mahonia* and the Mountain Arbutus.

Stay! let me get off; here is a small waterfall, coming straight over a cliff about sixty feet, there should be some good Ferns at its base. Yes, here we are; two or three specimens of the beautiful *Cheilanthes*, or *Cincinalis pulchella*, a *Polystichum*, a variety of *Selaginella*, a dozen plants of Solomon's Seal in seed, and two specimens of *Lobelia cardinalis* in full flower. What a treasure trove! I put specimens of each in my sketch book, and on we go.

This time I take to walking and jumping, and let HANS ride. See, here is a

handsome shrub in flower. I scramble up to it and find it a beautiful Trumpet Flower, I believe, one of the *Bignonias*, but which I don't know. What a grand clump of Ferns. Its great bold fronds spreading outwards in a beautiful curve. What is it? an *Osmunda*? No, see, here is the oblong indusium near the midrib, showing it to be *Woodwardia radicans Americana*, and a grand specimen it is, quite four feet in diameter, and the fronds fully as many feet long.

"Hi! Mr. W., come here, quick!" I hear HANS shout, and rush back to see him standing on a boulder, amid-stream, with the portmanteau in his hand, and Jim with his hind quarters under water. I jump for the rock and seize the baggage; Jim gives a lunge forward and goes in head first, a smart slap on his quarters, and he struggles up and gets to land. "What ailed him, HANS?" I ask, "a cramp?" "No, he had got his fore feet wedged between two rocks in the ford, and couldn't extricate himself, and so he thought of lying down and I had to jump."

Well, both horses and ourselves were now pretty well used up, so we resolved to camp, as it was a nice comfortable place. A pile of drift-wood deposited by last winter's floods against the Alder trees, served our fire, and while ANDY and HANS watered and fed the horses, I lit the fire and put the kettle on for tea. It was well we staid, for although it was broad daylight when we stopped, in twenty minutes it was as dark as pitch. After supper I lit my pipe and wandered down to a flat rock I had noticed on the edge of the stream, and quietly enjoyed myself watching my companions at the fire. After a while, feeling chilly, I joined my companions within the warmth of our camp fire, and the steam arising from my clothes makes me aware that I have also wet stockings on my feet, so I forage in the pockets of my knapsack for a dry pair, take off the wet ones and lay them on a flat rock near the fire, and in half an' hour they are dry again. ANDY is disappointed that we have not found any rattlesnakes or scorpions. I assure him that for my part, although an enthusiastic naturalist, I prefer at present not to make their acquaintance. We now light a fire near a sand bed, take off all the larger stones and make it tolerably smooth, lay

down on our blankets, cover ourselves with our great-coats, and, lulled by the music of the rushing rivulet, are soon asleep.—W. H. WADDINGTON.

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### ODD GROWTHS.

The first picture is of a White Pine tree that grew along the west branch of the Susquehanna, in the old Keystone State. It grew as straight as an arrow for fifty feet or more, then branched, and about ten feet above one of the limbs sent out a branch which joined the other and

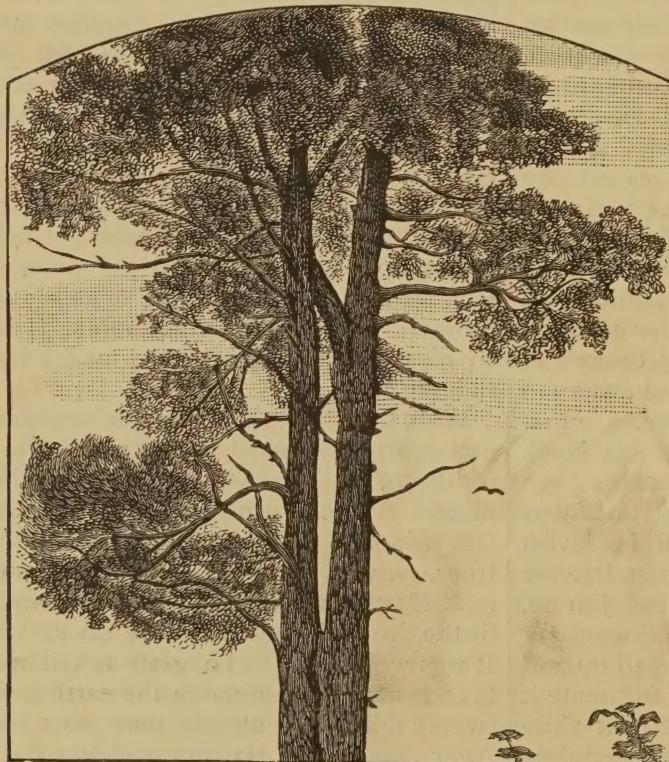
out a branch which terminated in a second head.

Our next picture shows the branches of a California Oak in Lake County; one branch has leaned down upon the other, and in time grown fast. This often occurs with the Oak tree in California.

Our next picture is of an Oak tree growing through a petrified Red-wood; it has pushed its way in the world. The base of this petrified tree is nine feet through. This is one of a number of exhumed trees that are to be seen at Petrified Forest, Sonoma County, California. Around on the hills many more trees can be seen peeping through the ground; if these could talk, perchance they'd tell a tale of when this earth was young.

Our two next pictures are not odd, but only beautiful; the first, Palmettos on the low banks of the St. Johns, Florida. The Palmetto, to me, is a thing of beauty always, it is a picture in itself, even without its surroundings.

Our last, one of the great Red-wood trees of California, out of which the building lumber of our coast is made. This tree was about twelve feet in diameter at the base, and towered up between two and three-hundred feet. These trees generally have very straight grain, we have seen splints



WHITE PINE.

formed a Siamese-twin Pine tree. This is not the only growth we have seen of this kind, but the only one from which we took a photograph.

Our next picture was taken far away south, in Florida, in Jacksonville. It is a Cabbage, fourteen feet tall. It grew in a colored aunty's yard. I asked, "Aunty, how long is it since you planted that Cabbage?" "Ise planted dat Cabbig six yeahs go; Ise thinks Ise leaves dat Cabbig go to theed second yeah, but dat Cabbage nebah goan to theed yet, and de Lawd only knows when dat Cabbage gwine to theed." There it grew, among the Peach, Banana and Orange trees, and about three feet from the ground sent

forty feet long. Where a tree had fallen and struck a stump or rock, a little ways from where this photograph was taken, a man shaved five hundred thousand shingles out of one tree, and spent all his money for whiskey. I wish men were wise and would love beautiful flowers and shrubs and trees, and try to enjoy this beautiful world, and try to know something about this strange life we live, instead of pouring infernal drink down their throats "to steal away their brains." To me this world is a world of beauty and grandeur, it seems, if men were unselfish and wise, as if we might have heaven on earth.—E. A. BONINE, *Pasadena, Cal.*

### GRAFTING THE GRAPE.

I have just noticed Mr. MILLER's article on grafting the Grape in your September number, and as you intimate that you would like to hear from any, if such there be, that has better success than he reports, I will give you my method.

I have been grafting Grape-vines successfully for years, and have repeatedly published my method.



CABBAGE, FOURTEEN FEET HIGH.

Why Mr. MILLER and others continue to follow methods giving such poor results is more than I can tell. Give me wood with live buds, and I am as sure of success as with the Apple. I have repeatedly grafted row upon row of vines that proved undesirable with new varieties, and can show them now, with not more than four or five missing in a hundred. In the spring of 1883 I put in several grafts of Etta, for which I had paid a big price, but the buds had been injured and but one graft grew. I left all the wood on, last fall, intending to use it this spring to graft on other vines, but the

last severe winter killed nearly all the buds; a few started, and these I cut and grafted after they had swelled enough to show that they were alive, and I now have a full row of seventeen vines.

The main requisite is to have wood with sound, live buds. If the wood to be grafted is to come from a distance it should be procured in the fall, and packed in damp moss and stored in a cellar. If the wood intended to be grafted is on one's own place, and there is not too much danger of winter killing, it is best to leave it on the vine until near the time it is wanted for grafting in the spring.

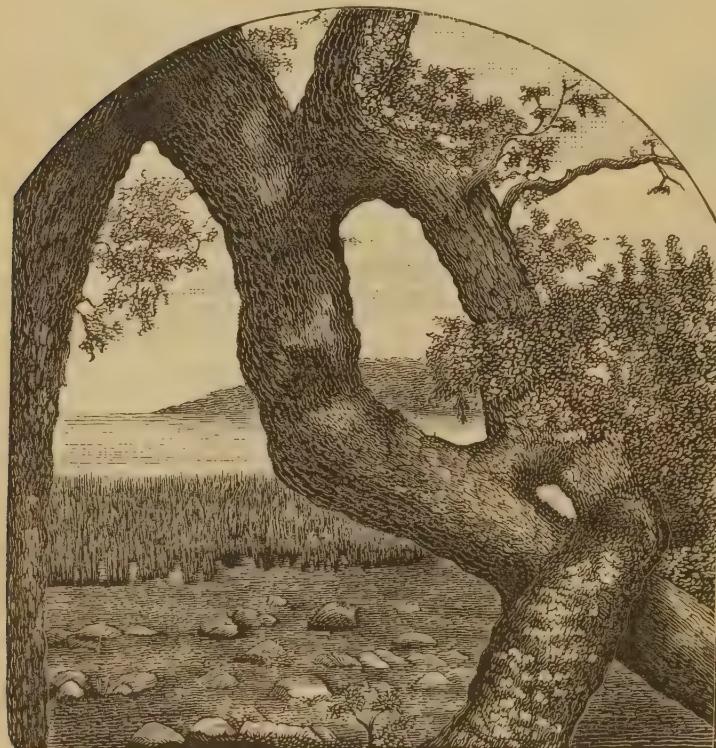
I prefer to graft when the buds on the scions have swelled enough to show they are living, be they on the vine, out of doors, or in moss in the cellar. I have used wood successfully that had made a growth of an inch or more; in that case I break off the young shoot, and the secondary buds will then push, and will make just as good a growth as the main bud would have done.

To graft a Grape-vine remove the earth and cut off the vine from two to six inches below the surface, split the stock so as to make a smooth cut. I do not believe a rough surface, such as a saw

would make, is best to secure a ready union of stock and graft. If the grain of the wood is wavy, as is usually the case with old vines, the cut should be made by placing the knife on the side where the graft is to be placed, and driving it in toward the center with a light mallet; cut the scion three to six inches long, and cut to a simple wedge, as in ordinary cleft-grafting, thicker at the front than back. I never cut a shoulder, as recommended by MILLER and HUSMANN. Insert the wedge in the cleft of the stock so that the liber, between bark and wood of stock and graft will meet, at least some-

where, so as to unite when growth takes place. If the stock is small, so it will not hold the graft firmly, a tie will be necessary; I use common jute or cotton twine, such as is used for wrapping goods, winding it around the union three or four times and tying.

If the stocks are old and very large they may pinch the scion too hard; in that case a piece of wood should be cut out wedge-shaped, but smaller than the wedge of the scion, so that the scion may be held firmly, yet not too much so.



OAK TREE IN CALIFORNIA.

Then draw up the earth and press firmly about the union; bring the earth up so as to come to, or just over, the topmost bud; mark the exact location of the bud by sticking a small twig beside it. Mulch a space about the graft eighteen inches or more in diameter and an inch in depth, with saw-dust or other suitable material, and, if well done, at least ninety grafts in a hundred should grow.

Some one may ask, "What about grafting-wax, or cement, for the union?" I never use any, it is worse than useless; the damp earth pressed firmly about the union is all sufficient. Neither do I consider the bleeding of the vine, that some talk so much about, any detriment; on the contrary, it keeps the earth about

the scion moist, and keeps it alive until a union is formed. Such, in short, is the simple method I have followed for nearly thirty years with uniform success.—E. A. RIEHL, *Alton, Ill.*

#### PARSLEY.

The best way to sow Parsley is to sow the seed in a box of sandy, rich earth, sift the lightest layer of leaf-mold over, set the box out of doors and forget all about it. The Parsley is of the same self-willed temper as the Angelica, Alexanders and Artichoke, which come up when they are ready, and not before, the latter sometimes taking a whole year before it concludes to start, Parsley often taking a month or two to sprout. For this reason it is not well to sow it early in spring, when the seed may decay before coming up, but make the Parsley bed at corn-planting time. The best time of sowing all herbs, however, is in the autumn as soon as the seed is ripe. Have the bed dressed with plenty of sand and coal ashes, the latter, after the usual screening, being passed through a sieve, which leaves them fine as meal. In this state only are coal ashes fit to put on

the ground, and in this state there will be less doubt whether they are of any benefit to the garden or not. At least, they mellow and warm the ground as we want it for a herb border. An inch of old crumbly manure sifted on the top of this soil after its dressing, leaves it in good condition for seeding. Then, if you can get seed of a neighbor from plants, just ripe, you may be sure of seedlings that will have a good start to pass the winter. Still, Parsley is a plant for all the year round, and you may sow at any time convenient, in boxes in the house, or in the open ground as suits the season, if you have patience to watch and keep it warm and barely moist the first three weeks, after which frequent sprinklings will has-

ten the tardy seeds. Although the new seed comes up best, it is good for two or three years.

Now, Parsley in this country, is too commonly used solely as a garnish for dishes, and the curled sorts are chiefly in demand. But the wise, knowing the excellence of its flavor, discriminately used, and its benefit to the health freely eaten, choose the curled for garnish, but the plain for cookery, having the highest flavor. Wherefore, plant one row of the

and other southern nations is largely due to the constant presence of Parsley and kindred herbs in their dishes. In soups, with fish, beef-steak, and especially with Potatoes, Parsley is indispensable. What better dish varies the home table than Lyonnaise Potatoes sliced cold, browned in beef fat with a few shredded Onions crisping at the same time, and finely cut fresh Parsley peppering the whole when done.

Parsley is one of the herbs that like a rich, light soil, with good drainage. If you have a ditch about the place, half fill it with stones and trash, fill with old manure and sand well mixed with a little garden soil, and plant it to Parsley. Once made, a Parsley bed seldom runs out; hence, perhaps, the old superstition that it was unlucky to plant Parsley, which every place ought to have from old sowings. The young plants like shade, and the old ones like to be under a fence or a row of



OAK GROWING THROUGH A PETRIFIED RED-WOOD.

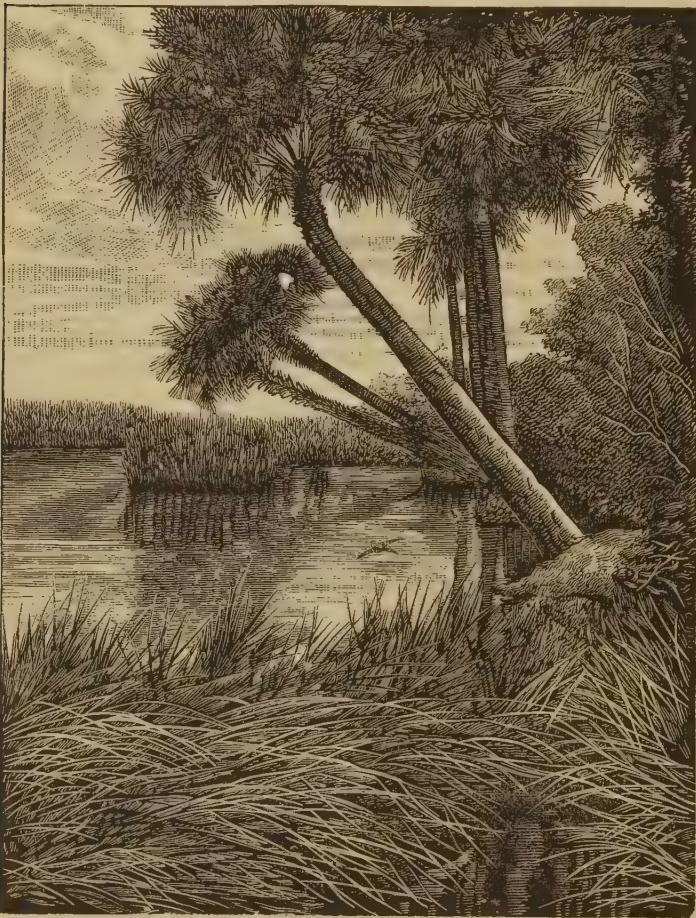
Curled, or the Fern-leaved, and two of the Plain, and as you love health let the border be long enough to cut a handful every day in the year.

What disease is there Parsley is not good for? The worst kidney disorders have no better medicine. GALEN recommended it for epilepsy, a strong decoction cures jaundice and liver complaints; it gently removes worms in children, and it is of use to their elders plagued with the gout. The ancients wore crowns of it at feasts, and ate it to prevent being overcome with wine. Parsley is a great preventive of disease, removing obstructions and purifying the blood. Scurvy and scrofula are purged by it, and the better health and liveliness of French

Raspberry bushes to screen them from midsummer sun. Parsley dies in cold, stiff soil, therefore the bed where it is planted must be under-drained.

Six weeks after coming up, a few leaves may be cut from a row devoted to early use; but the main crop should be left to grow thick. It is cut only as wanted, leaving a good shoot to each root to start again. Two hundred feet of it is not too much for the use of a large family who know its worth, and in such a bed, cut successively yard after yard, the first will be fit to cut anew by the time the last is done. Stirring the soil and weeding is all the care it needs till winter, when two dozen roots may be taken up in boxes for the kitchen, and the bed covered with

long, clean litter or boughs, which will protect it enough to give green cuttings up to Christmas. It cannot be dried to advantage, but cooks fry sprigs crisp and keep in boxes for future use. Never let it flower, unless seed is wanted, for which a dozen stout plants may be set in full sunshine and well cultivated.—SUSAN POWER.



PALMETTO TREES.

#### THE UMBRELLA GRASS.

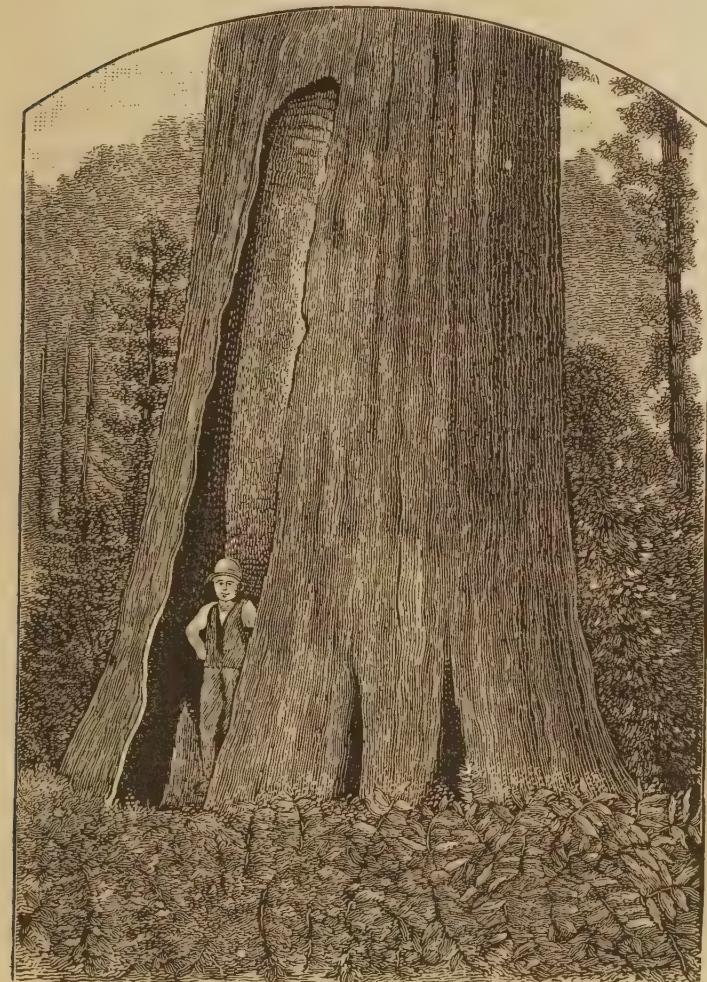
The Umbrella Grass, *Cyperus alternifolius*, is a very ornamental and effective greenhouse decorative plant, belonging to the natural order Cyperaceæ. It is a native of Madagascar, whence it was introduced in 1781. It is a sedge-like plant, attaining a height of one and a half to three feet, the plant consisting of a mass of reedy stems, each stem being surmounted at the top by a large tufted whorl of leaves, from which circumstance the popular name of Umbrella Grass is derived. It is a plant of the easiest cultivation, thriving in almost

any soil and situation, providing it is not a dry one, and on this account it is an excellent plant for amateurs to cultivate; indeed, it is an excellent plant for all, as well grown specimens can be used for decorative purposes, for vases, wardian cases and ferneries, while as a window-garden plant its value is beyond all question. Notwithstanding the fact that it will grow in almost any soil and situation, yet no plant will better repay a liberal and generous treatment than this *Cyperus*. Give the plant a pot proportionate to its size, and a compost of two-thirds well rotted sods and one-third well decomposed manure, drain the pot well and give the plant as light a situation as possible, and a temperature of from forty-five to fifty degrees. Be sure to give an abundant supply of water at all times, and it will well repay all this by the increased vigor of its growth.

The above directions are more particularly applicable to the winter, while for the summer season it is preferable to adopt a somewhat different manner of treatment. If it is desirable to retain the plants in pots or vases, they should be turned out of their pots about the middle of May, the bulbs of earth considerably reduced, and be repotted in pots of a larger size. They can then

be removed to the greenhouse or plunged in a partially shaded situation, or, if desired, be planted in a somewhat shaded, rich, deep border, care being taken to keep them well supplied with water. If under glass syringe, them freely and frequently. Propagation is effected by division of the roots; this is best done when repotting them in the spring, and after the plants have become established in their pots a weekly application of liquid manure can be used to advantage. In attempting the cultivation of this plant it is well to remember that it requires an abundant supply of water at

all times, and if this is neglected it will become stunted and acquire a decided yellowish tint, which materially injures its appearance.—CHAS. E. PARRELL,  
*Queens, N. Y.*



A GREAT RED-WOOD.

#### IRRIGATION.

Is irrigation for gardens and small fruit crops of any particular value in that part of the country east of the Mississippi?

One answering this question in the negative will be expected to tell why it is not. Our small fruits and gardens must have water, and a great deal of it. If it fails to come when needed, in the form of rain, how can we best secure a supply of moisture? A rich soil, made deep and mellow by thorough cultivation, is one of the first requisites for a good garden, and to any degree of success in growing small fruits. Such a soil will drink up and hold a great deal of water, and where too rapid evaporation can be pre-

vented will prove the best reservoir from which our crops can obtain moisture in times of drouth. There are two ways in which we may expect to keep this water for our crops; one by the shading of the ground, and the other, and the most effectual, by making and keeping the surface so mellow that it will hold the rising moisture. As to small fruits, Strawberries, oftener than any other, suffer for want of water. Yet the best crops of Wilson's I ever raised grew in one of the driest seasons we have ever had here. The ground had been very highly manured for Squashes the season previous to setting. The plants were set early in spring, and though the rows were a little over three feet apart they had taken possession of the whole of the ground before the season of growth was past. The next year the weather, the latter part of May and all of June, was very warm and almost without rain. There was much complaint of the failure of Strawberries and suffering of gardens. Our Strawberries were all one could ask as to yield, while the quality was

ahead of anything we had ever grown of Wilsons. "Oh, what berries," was the exclamation of more than one.

With varieties requiring hill culture, thorough cultivation as long as practical, and then a good mulching with some fine material, will secure about all that could be gained by irrigation with only a small part of the expense. Other small fruits with good care rarely suffer severely from drouth. But what shall be done to save the garden? Just this, is the way ours has been treated, and we never fail on account of drouth, either in the vegetable or flower garden. For the past twelve years we have exhibited vegetables some seasons, and flowers every

season, and whenever we have done so we have received more premiums on cut flowers than all other exhibitors combined. Mr. REYNOLDS, the gentlemanly exhibitor of VICK's flowers at many of our fairs, will, I think, bear witness that our displays of cut flowers are no mean competitors. We used to think that, at least, Pansies and Dahlias must be watered in very dry weather; but experience has taught us that we can do better by keeping the surface thoroughly worked. What would be thought of going over ground three or four times a week? We have often done so, and with less expense and better results than by the use of water. It takes but little time, and can be done with the hoe, garden-rake or hand cultivator, as the distances between plants may admit, only be careful not to work so deep as to disturb roots; they are all needed at such a time. If the previous working has not been deep enough it is too late to begin now. About the same thing is to be done in the vegetable garden, only, the horse and cultivator largely take the place of hand working. We put all of our garden in rows so far apart as to admit of the horse and cultivator between. It may take a little more ground, but we get vegetables of better quality and much easier than by hand culture. Certainly irrigation can not be said to be of "particular value" where the benefits obtained are not, at least, equal to the cost. In regions where it is used, they are sure of getting returns from the investment which makes it possible every year, while in the greater part of the country in question, it would, most of the time, be idle capital. Where would be its dividends in such a season as that of eighty-three. I think that observation and experience will both testify that good gardening or farming has little to fear from want of moisture in the eastern portion of our country, and that advanced methods of tillage give the best results in seasons comparatively dry. Is it to be supposed that those gardens which dry up so badly would be much helped by being irrigated? The hot sunshine, which usually accompanies our dry weather, would put much of our ground in such a condition as to make the saying true, that the remedy is worse than the disease.—A. MATSON, *Lysander, Onon. Co., N. Y.*

### REELFOOT LAKE.

What is known as the alluvial plain of West Tennessee reaches from the Chickasaw bluffs at Hickman, Kentucky, on the Mississippi River, over a hundred miles in length, and from five to twenty miles in width, along the east bank of the river. Owing to the overflows of the great river, the lands remain in their primitive condition of solid forests and lakes, and bayous. My object is to call attention to the largest and most interesting of these lakes. Reelfoot Lake is about eighteen or twenty miles long, and from one to three miles wide, and like many other minor lakes, was found during the earthquake shocks of 1812. History says these shakes occurred during a space of several years, and sometimes they occurred every day, and then at longer intervals until 1823. On one of these occasions the bed of Reelfoot creek was filled up, which stopped the flow of the waters into the Mississippi, and from there over into the Obion river, southward, requiring a rise of some forty feet. When the lake was first found it presented to the view a most remarkable sight—a dense forest filled with trees of all sizes standing half submerged in water. On the east side of the lake are the high bluffs and foot hills from which a view of the lake and alluvial plain stretching miles away, covered with the heaviest forests of Cypress, Oak, Pecan, and American Holly, perhaps, on the continent. The nut-bearing trees, such as Mississippi Shell-bark Hickory, Pecan, in addition to the Grapes and Persimmon, furnish a plentiful supply of food for the wild beasts that roam at will in this vast area of unbroken woods. Here is the hunter's and fisherman's eldorado. The bear hunters and anglers go to these woods in the same turnout and remain for weeks, reveling in the recreations of the deer drive and fisher's boat. So plentiful are the game and fish that, out here, forty miles away, loads of white bass are sold every week through the fall and winter months. Near by is Crockett County, with its county town of Alamo, named so for the great pioneer hunter and patriot, David Crockett, who's thrilling exploits in these woods are a part of Tennessee history, and who, when population got too thick for him, moved away to Texas, and fell at the battle of Fort

Adams, now in San Antonia, in defense of the liberties of his adopted state.—  
A. H. BRADFORD, *Brownsville, Tenn.*

**A SATISFACTORY HOUSE PLANT.**

Beside me, on the table as I write, this evening, is a plant\* bearing a great white flower, which fills the room with its fra-

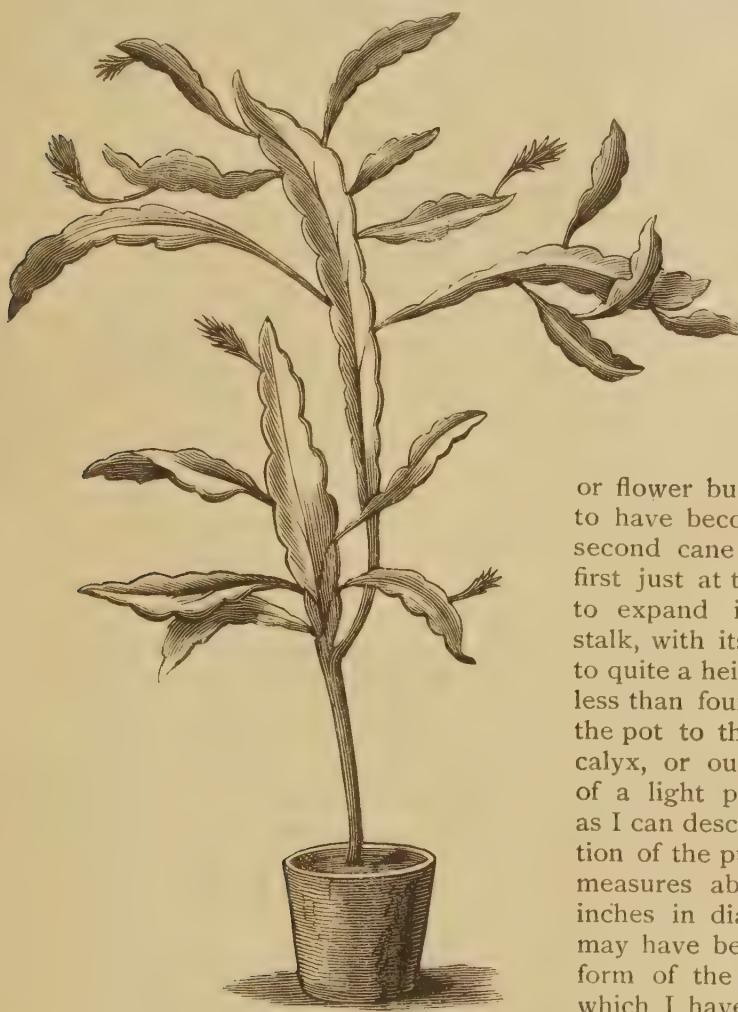
Cactaceæ. My plant has been grown from a small cutting procured four years ago last spring. It made an attempt at flowering over a year ago, but the buds blasted for some reason, perhaps from the fact of the smallness of the jar in which it was at that time. This season, however, it has had four blossoms, always

one at a time, and at intervals of several weeks, and has a number of buds on it now, as it meditating more efforts in the same line. This plant consists of long, smooth, flat leaves and canes; the canes being a kind of shoot or stalk, which widens into a leaf at the top, this throws out leaves at each side, which in their turn may produce either leaves

or flower buds. My specimen seems to have become a two-story affair, a second cane having shot out of the first just at the point where it begins to expand into leaf-form, and this stalk, with its leaves, carries the plant to quite a height. It measures a little less than four feet from the bottom of the pot to the top of the plant. The calyx, or outer part of the flower, is of a light pinkish brown, as nearly as I can describe it, and the inner portion of the purest white. This flower measures about eight and one-half inches in diameter; the first blooms may have been a trifle larger. The form of the pistil is very like that which I have seen in a picture of the Night-blooming Cereus, the stigma

having a wheel or star-shaped look, but the myriads of feathery stamens instead of being disposed equally around the pistil, seem to be mostly on the lower side of the flower. The blossom somewhat resembles an immense Pond Lily, but is far more delicate and of such exceeding loveliness that one could fancy it the abode of Titania herself.

I think one bud, before opening, measured fourteen inches or more in length. The buds grow slowly at first and are straight, but as they draw near to the flowering period increase in size rapidly, and curve until they are something like a



PHYLLOCACTUS PHYLLANTHUS.

grance. It is not yet nine o'clock, but the blossom, although not as fully expanded as it will be an hour hence, can not be much improved. It is a perfect vision of sweetness and loveliness, and yet, to-morrow, it will be only a limp bud reclosed, never to open again. There are several specimens of this variety of Cactus in the neighborhood, where they are called the Night-blooming Cereus; but I am inclined to doubt the fact of their belonging to the Cereus family at all, although evidently members of the

\* *Phyllocactus Phyllanthus*.—[ED.]

fish-hook in shape, the point of the bud answering to the point of the hook. The leaves of the calyx show signs of opening during the day, but the flower really begins to unclose about six or seven o'clock in the evening, and commences to close sometime after midnight. The flowers vary in time of opening. The first signs of closing I noticed in one being about fifteen minutes before one o'clock, and the next, I think, was later. It is a very satisfactory plant, requiring little attention, and it must have borne a considerable degree of cold last winter without serious injury, as I lost many Geraniums in the same room, and the earth in a great many of the flower pots was frozen, owing to the fact of the fire not being properly attended to during the extreme cold weather. As several buds blasted, I think the plant would have produced more flowers, if it had been in a larger jar; it has grown very fast since it was repotted, and I did not dare to repot it while flowering. I think very likely I put lime in the earth the last time I potted it, as lime is recommended for the Cacti.

It has been kept most of the time through the winter and summer where the sun could shine on it during the early part of the day, sunshine being necessary, it is supposed, to the welfare of the Cactus tribe, though I don't know but the Lobster-claw Cactus would persist in blossoming if it did not have a ray of sunshine from one end of the year to the other.

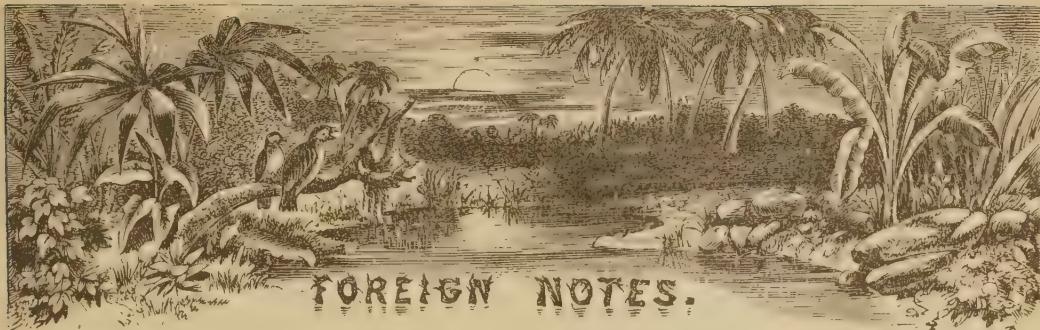
All specimens of the Night-blooming Cactus are not so chary of blossoms as mine has been, for I have seen seven flowers at one time on a plant owned by an acquaintance of mine, but the plant was, I think, an older one. This Cactus is very satisfactory in many ways. It is free from insects and easily kept clean, requiring a very little care a great portion of the year, but I think plenty of water during the blooming season. It is beautiful when in flower, and is a source of gratification, not only to myself, but also to neighbors and friends, who are glad to come in numbers to enjoy the loveliness and fragrance of this wonderful flower, which has been brought from its own sunny clime to brighten our northern homes with a glimpse of tropical life.—L.

#### CULTURE OF CELERY.

I am a farmer's wife, with a natural liking for all good vegetables, and if the "gude mon" cannot get time to care for them, I do myself, with some help. For several years I have tried to raise Celery, and have at last succeeded in raising the best I ever saw. At first I had it set out in the garden, but it never grew tall enough to admit of blanching, so I adopted the practice of taking it up and putting it into barrels in the cellar late in the fall, and waited for new sprouts to grow. After a while I found that the plants while young need plenty of water, and more than they could get so far from the house. I raise the plants in a hot-bed, sowing the seeds in April, and like the dwarf kinds best. For two years I have used Turner's Incomparable Dwarf White. Fresh seeds are indispensable. About the middle of July I have a trench made near the house, where we can throw all of our clean waste water. The trench is about twenty inches deep and two feet wide. Into this is put well rotted manure to the depth of four or five inches, then covered with about four inches of soil. The plants are set in two rows six inches apart, and the plants about four or five inches apart. In this way the two rows can be blanched by drawing the soil up on each side and pushing it through between the plants. I use a small trowel, doing that part of the work myself, getting the man to loosen the dirt and draw it near the rows. Care must be taken to hold the stalks close together while the dirt is being heaped around them. We commence using early, and in November have the remainder put in the cellar. We have dirt thrown in through a cellar window and plant the roots firmly, watering them about once a month. The plants are in fine condition all winter long. When brought to the table the Celery is perfectly delicious, and many of the stalks measure over two inches across.—MRS. W. W. H., Chagrin Falls, Ohio.

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THE GREAT EXPOSITION.—At the New Orleans Exposition Dr. TAYLOR, the microscopist of the Department of Agriculture, will exhibit a great number of enlarged drawings of cryptogamic plants, including many of the parasitic fungi of vegetation. This display will be highly interesting and instructive.



## FOREIGN NOTES.

### CARPETING ROSE BEDS.

The great increase of dwarf Roses on their own roots renders the discussion of this question of less urgency and importance than it used to be. Still, the baldness and barrenness of the ground line of Rose beds and borders is one of the least attractive features of the majority of gardens. The bare earth is accepted as the penalty we must pay for the luxuriant growth and rich bloom of the Roses. The Rose is a gross feeder, and the more food it can have the better the result. Such is the short and easy way of settling the question in favor of allowing no rival to compete with Rose roots for the food in the soil in which they grow. There are, however, many missing links in this chain of dogmatic reasoning well deserving the earnest attention of rosarians; such as, for example, whether the sun and air do not steal more strength from the bare ground than would be absorbed by a surface vegetation, at once dense and the reverse of gross. Such a covering might possibly conserve more food than it absorbed, and if so, the Rose roots would be the gainers, while the beauty of the covering would also be a gain. There are at least two ways of meeting the difficulties or dangers arising from the surface covering of Rose beds. The one is by choosing such plants as will afford the most protection to the surface with the least impoverishment of the mass of the soil, and the other is to confine the roots of the plants used for surfacing in pots, tubs, or sunk pockets formed of brick, stone or cement. A great many plants, such as several kinds of annuals, bulbs, succulents, and herbaceous plants, yield a maximum amount of surface covering and beauty with a minimum amount of soil exhaustion. Many creeping plants again, such

as Periwinkles, Ivies, Clematis, &c., if planted in enclosed areas or pockets, will afford beautiful surfacings for Rose beds and borders without the possibility of exhausting the root run. Nothing, perhaps, looks so rich as a covering of Clematis under Roses, though other plants, such as Pavonia grandiflora, the variegated Mesembryanthemum, and single or Pompon Dahlias, pegged down, also have a rich and pleasing effect. While suggesting these as a mere sample of scores of plants that may be used, it may be well to add that there are no surface coverings for the soil of Rose beds equal to Roses themselves. Dwarf Roses so planted and trained as to fairly cover the whole earth, that is the perfection of Rose growing in the open as near as may be. Mignonette, so generally used for this purpose, is too gross a grower and greedy a feeder on rich Rose soils. A thin covering of Phlox Drummondii and its finer varieties forms a brilliant carpet, and so do the Indian Pinks of the improved Hedewigii strains; while, under old tall standard Roses, Cloves, Carnations, Picopees and Pinks afford a contrast of form and color and harmonious bouquet of perfume that seldom fails to please.—T. F., in *Gardening Illustrated*.

### TRAVELS OF A BOTANIST.

The English botanist, A. W. BENNETT, who traveled in this country the past summer, and from whom we had the pleasure of a call, in August, in company with Dr. DALLINGER, President of the Royal Microscopical Society, has been giving his observations here in a series of letters to the *Gardeners' Chronicle*. In one of these he notices the principal forest trees of this country, but apparently overlooks neither shrub nor lowly herb. In one of his latest letters he notices the vegetation

from Lake Superior, westward, remarking: "The middle of September is not the time of the year to see the flora of the prairies in its beauty, but even now there is sufficient of interest for the European visitor. One feature that cannot fail to strike the most casual observer is the extraordinary wealth of Compositæ; and he must be a born systematist who could in a short time master the distinctions and relationships of the numerous species of Aster, Solidago, Erigeron and Helianthus, not to mention several other less familiar genera, many of the species being of very great beauty. Among plants belonging to other natural orders still found in flower may be mentioned the dwarf Malvastrum coccineum, which in the spring stars the grass with its crimson flowers, the yellow Linum rigidum, the "Prairie Clover," Petalostemon violaceum, so unlike a Leguminous plant in its general aspect; Rosa blanda, Gaura coccinea, the white *Oenothera* albicaulis, the Prairie Cactus, Maxillaria vivipara, Aralia hispida fringing the track-side with its dangerous hispid stems, Dracoccephalum parviflorum, several Pentstemons, and Gentiana detonsa, rivalling our *G. verna* in the brilliancy of its azure."

He also mentions "the great beauty in the southern districts of Pennsylvania and Maryland of the tree known to us as the Tulip tree, to the Americans as the Tulip Poplar, *Liriodendron tulipefera*. In the neighborhood of Philadelphia it seems to have formed a large portion of the original forest, and trees with perfectly erect stems and a magnificent head of foliage are still standing, eighty to one hundred feet in height, and with trunks two and one half to three feet in diameter.

"On reaching the Rocky Mountains themselves, as soon as you rise to an elevation of 8000 to 10,000 feet, the remarkable phenomenon presents itself of a flora essentially European in its genera, and even to a certain extent in its species. This will be illustrated by the mention of a very few of the plants gathered in a single day's botanizing on the mountains above 'Kicking-horse Pass,' just below the snow summit, viz.: *Parnassia fimbriata*, *Dryas octopetala*, *Linnæa borealis*, *Saxifraga aizoides*, *Listera cordata*, *Silene acaulis*, *Spiræa betulæfolia*, *Galium boreale*, and many others." —A. W. B., in *Gardeners' Chronicle*.

### ORCHIDS IN ROOM WINDOWS.

In the early part of the present week a friend called here and invited me to see his Orchids—exotic Orchids, he said—growing in an ordinary bay-window, and without artificial heat. After reading in your columns the treatment to which this class of plants is usually subjected, I assure you I was by no means prepared for the treat in store. On entering the room, the first plant to attract my attention was a fine specimen of *Lælia Dayana* growing on a block of wood suspended from the window-sill. This plant, which was in full flower and had been so, my friend said, for the past three weeks, took my fancy immensely, not only from the natural way in which it was growing, but beauty of flower, which shed quite a halo of delight around the room. Amongst others in excellent health were *Odontoglossum odoratum*, *Maxillaria leptosepala*, *M. nigrescens*, and *M. venusta*, *Lycaste aromatica*, and *L. Deppei*, *Dendrobium nobile*, *Oncidium ornithorhynchum* and *O. prætextum*, *Angræcum falcatum*, and others. Several of these were in flower, notably *Odontoglossum odoratum*, *Dendrobium nobile*, *Oncidium ornithorhynchum*, and *Angræcum falcatum*. The window had a north-western aspect, and was well supplied with light. If exotic Orchids can thus be successfully cultivated in an ordinary sitting-room window—a fact that I was not before aware of—what an amount of pleasure and delight will be in store for the lovers of these plants who cannot afford them the glass structures and methodical treatment usually recommended.—A. D. W., in *London Garden*.

### FOLIAGE FOR ORNAMENT.

*Tradescantias*, such as *Zebrina*, take root in water, and have lived with me for weeks, forming a foliage for whatever flower I may have. I change the water, and occasionally I submerge the foliage in a large basin. After discovering this, I tried sprays of *Coleus*; they also rooted, and I have a dozen or more ornaments filled with this combination. If the *Coleus* is brilliant no flowers are required. I break off the shoots of *Tradescantias* the length required for each ornament.—E. R., in *Gardening Illustrated*.

### THE UPAS TREE.

For many ages this tree has been described as the poisonous tree of Java, and is pretty generally referred to in oratory, in a figurative sense, as spreading death to all who may come within its radical influence, and this has, no doubt, arisen from the fact of dead bodies having been found in its vicinity. I, however, believe this is capable of explanation, and that the Upas has really no more to do with it than the Tenderdon Steeple has with the Goodwin Sands. Java, of which island the Upas is one of the indigenes, is, and always has been, historically subject to volcanic disturbances, so much so that an early circumnavigator, one of the Dutch voyagers, very expressively described it as "the lid of Hell." The other islands of the group, Sumbawa, Flores, Timor, etc., have all been subjected from time to time to severe visitations of the above kind. Another late severe one at Anjer, Straits of Sunda, shows that there is a large amount of latent energy in that locality.

Some years ago I was, one very dark night, trying to find our way into the Straits of Madura, at the east end of Java, and suddenly the whole sea be-

itself. Now for its bearing on the much maligned Upas; referring to the volcanic character of the island, I am inclined to believe that there are continuous liberations of gases from crevices of the earth, these gases being more or less poisonous, probably carbonic acid gas, deadly to human life, but possibly innocuous, or even beneficial to the tree, and the dead body being found in the vicinity of the tree at the first blush of the thing, charges it against such tree. In all probability, such escapes would take place in ravines and rocky dells where the air hung heavy and was not disturbed into a healthy condition for human consumption by the winds, and would thus hang heavy, dank, and deadly in such places, and one coming into it and breathing it would inevitably die. The discoverer of the remains coming at a period when there happened to be no discharge of noxious vapor, or when a brisk breeze was dispelling it by admixture with the surrounding atmosphere, would experience no ill effects. *Voilà tout.* I think I have vindicated the character of the Upas, at any rate, these are the facts.—S. W. VINEY.

The above correspondence recalls to mind a somewhat similar account of the Upas tree, published a few years since in the *Garden*, which, with an engraving, is here reproduced.

"Few plants are more popularly known than the Upas tree (*Antiaris toxicaria*), and there are few that have had more exaggerated stories written about them. Everybody has read or heard of the extreme virulence of this tree, how that in the valleys of Java no living creature, whether human or belonging to the brute creation, could resist its



ANTIARIS TOXICARIA—A, MALE FLOWER-HEAD; B, FEMALE FLOWER, SHOWING TWO-PARTED STYLE.

came as white as, and generally presenting the appearance of milk, and what astonished us most was that before we could get a bucketful on deck, in order to examine it to detect the presence of animalculæ, or phosphorescent matter, the milky appearance left, and it was ordinary sea-water, pure and simple. In a few hours the phenomenon ceased, and the sea resumed its normal appearance. There was, I may add, a close, stuffy atmosphere during the time it lasted. After an interval of several years, I observed that a Dutch captain sailing to the north of Java had met with a phenomenon exactly, in all its details like that of my own experience, and, putting my brains to work by the light of experience and observation as to how various waters could be aerated, my eyes were at once opened, and the idea evolved itself that the appearance I and my Dutch friend observed was really an aeration of the water, caused by some submarine escape or liberation of gases, at a great depth, made more evident, probably, by the darkness of the night, and the phosphorescent elements of the water

evil effects, even for the shortest space of time; that birds in their flight, unconsciously approaching within a certain distance of the trees, instantly fell dead; that criminals sentenced to death were certain to meet their fate if they were compelled to go within three or four leagues of a Upas tree, and that within this radius the ground was strewed with dead bodies and blanched skeletons. All these fabulous tales emanated from a Dutch surgeon who had traveled in Java, and afterwards recorded all he had heard from the natives regarding the *Antiaris*. These stories became diligently circulated by every writer who took up the subject, and the supposed virulence of

the Upas tree even formed the foundation for a lengthened series of lines in Darwin's "Botanic Garden." The greater facilities of exploration, however, and the spread of civilization, which since that time has developed itself, have proved all these startling accounts to be, to a large extent, fabrications, the fact being that the Upas tree inhabits the hot, damp, and low valleys of Java, where carbonic acid gas is generated in great abundance, besides which sulphuric vapors are emitted from the craters of volcanoes connected with the valleys, so that the Upas tree was at one time credited with these poisonons effects. Notwithstanding all this, however, the tree contains a very virulent poison. From incisions made in the bark a white or yellowish juice exudes in great abundance, and soon becomes concrete in a black, resinous mass; this resin, mixed with other ingredients, is used as an arrow poison, both in the chase and in warfare. The inner bark of the young trees, which is very fibrous, is used for making articles of clothing, but on account of the poisonous resin contained in it, it is said to cause great irritation to the skin of those wearing such garments. The Upas tree is one of the largest forest trees of Java, rising to a height of from 60 feet to 70 feet. It is monoecious, the male flowers being very numerous, and inclosed in a hairy involucrum of several divisions, turned or rolled inwards; the female flowers, which are solitary, grow in the axils of the leaves, in close contiguity to the male flower-heads, and, as they mature, give place to a succulent fruit of an ovoid, drupe-like form. The plant is not uncommon amongst tropical plants in botanical collections, but beyond its historical interest it has little to recommend it.—R.

#### HEADS OR TAILS ?

A curious heading this to a gardening paragraph, but it is suggested by the novel and interesting sight of a number of vines fruiting grandly, and yet literally growing on their heads. The story of the Lady Downe's house at Heckfield, has, in driplets, from time to time been told, but a short summary of its history will just now not be uninteresting. Planted originally in a south-west lean-to, it was found, owing to the admirable crop-

ping powers shown by the vines, and the value of the crop for late-keeping, expedient to take away the back wall of the house, and carry down a lean-to on the other side, thus converting the house into a broad, but rather low, span. In time the Vine-rods brought down this new slope filled all the available space, and just as an experiment, literally unable then to say whether it would or would not prove either successful or desirable, Mr. WILDSMITH layered the young leaders of the rods a few years since, with the result that all rooted, so that the novel spectacle was presented of a viney, the plants in which were rooted and making good growth at both ends; and it seemed hard to say which were the heads and which were the tails. In process of time the vines began to fail somewhat, for they were dependent entirely upon inside borders, and it was resolved to make now the most hazardous experiment of severing the rods of one-half the Vines at the ridge or apex of the roof that the old roots might be removed, that portion of the border be remade, and new Vines be planted. It was done, and curious to relate, the severed tops, still rooted by their heads in the opposite border, seemed not one penny the worse, but fruited as well as ever. Thus encouraged the other half were cut away last winter, and the remainder of the original border renewed and replanted, whilst all of one side the house remains covered by Vines growing and cropping as mentioned. Oddly enough, too, the crop on these old heads of Vines is a superb one—we doubt if, for the area, it has ever been better; the branches are numerous, are fine, and the berries unusually large and splendidly finished. Thus we have told a plain unvarnished story of a singular experiment in plant physiology and culture, the which, if productive of no practical good, may ever be quoted with exceeding interest.—*Gardener's Chronicle*.

**ICELAND POPPY.**—*The Garden* lately issued a colored plate of the Iceland Poppy, *Papaver nudicaule*, a hardy perennial. Although perennial, it is better to sow seeds of it every year. During several months, from late in spring till late in summer, it forms one of the chief features of the garden.



## PLEASANT GOSSIP.

### ANGULAR-WINGED KATYDID.

In looking over my plants, this morning, I found a bunch of eggs on a Rose bush, the same kind as some that are killing several of my neighbors' plants. I send the branch to you. Will you please tell me what it is, and how to get rid of it?—MRS. E. C. B., Atoka, Indian Ter.

The specimen of insect eggs mentioned above were received, and we recognized them to be those of the Angular-winged Katydid, as described on page 115 of this volume. At that place we gave the statements and opinions of Mr. Wm. SAUNDERS, the entomologist, in regard to the proper course to take when plants are infested with this insect. As one remark then made, viz., "they are nothing but eggs, and can do no harm as long as they remain unhatched," did not appear to hold good in this case, as the infested branch was evidently dead, we again wrote Mr. S. on the subject, who replied in part as follows:

Your valued favor of the 24th came duly to hand, enclosing the sprig of Rose bush with the cluster of eggs of the Angular-winged Katydid, *Microcentrum retinervis*. It is well known that this Katydid when preparing a place for the deposit of her eggs, gnaws off the bark of that part of the twig selected, and does, no doubt, injure the branches so operated on; but I have never before received any complaint of twigs being killed from this cause. From the way the enclosed Rose twig has been used, I should think it quite likely that the attack might prove fatal. Such injury, however, would not be likely to be attended with so serious a result in other cases. With the Rose the growth is indeterminate, the shoots continue to grow as long as the season remains open and the growth is soft and succulent. Under such conditions an injury of this sort is likely to result in the death of the twig; but in the case of hard-wooded trees, where the growth is determinate, and is completed early in the season much less injury would follow.

When I made the statement that "these eggs can do no harm as long as they remain unhatched," I was trying to impress your correspondent with the contrast between the harmless egg and the active, voracious insect, and perhaps omitted points which I should have given. While the eggs in themselves, in one sense, can do no harm, yet their presence and that of the glutinous material in which they are imbedded

would certainly interfere with the natural healing which might otherwise take place on a denuded surface, and in this sense they may reasonably be held to be injurious. I can suggest no better means of getting rid of the insect than that of cutting off the egg clusters and destroying them.

This very full reply of Mr. SAUNDERS, in connection with that published before, gives our readers all necessary information in dealing with the Angular-winged Katydid.

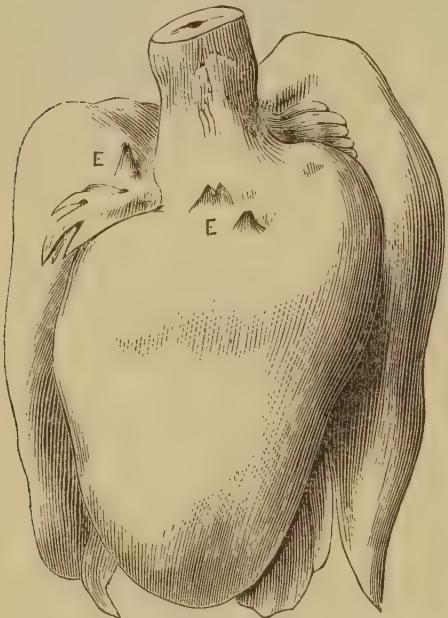
### CARE OF DAHLIA TUBERS.

Will you please inform me how to keep safely my Dahlia bulbs through the winter. Last spring I purchased of you a dozen small plants; they have flowered profuseiy through the season, not one plant failing to declare its beauty. When I took the bulbs up, a few days ago, I found them immense, each cluster as large as a well-blown foot ball. I was careful to remove all the dirt and dry them in the sun without breaking any part. How will they best keep this winter?

Again, if they survive the winter, how much can each root be separated into distinct bulbs? Apart from the grand cluster now, there are five or six separate bulbs attached to the main bulb by a small root, like so many distinct Sweet Potatoes. Can these be separated, and how, and how much can the main, compact cluster of bulbs be separated? I shall highly appreciate any information on this point.—F. H. C., Minneapolis, Minn.

The course pursued with the tubers after digging, as described above, was correct. To keep them through the winter store them in a frost-proof cellar, placing them in boxes or on shelves, and covering them with dry sand. If kept moist by burying them in soil on the cellar bottom, they are apt to decay when the weather is becoming warm. In spring place the clumps of tubers in boxes of soil to stand in the window, or in a hot-bed frame, or later in the season in a cold-frame. Water lightly, and they will soon begin to show buds at the crown or that part where the stem starts out from the tuber. When these buds are well developed separate the clump by cutting through the stem and making

as many plants as possible, each having an eye at the base of the piece of stem taken away with a tuber attached. These pieces can now be potted in good sized pots and kept in the frame until ready to



DAHLIA TUBERS, SHOWING BUDS AT E, E.

turn into the ground as soon as the frosts have ceased; or they can be planted at once where they are to stand, and be protected by hand-frames until there is no longer danger of frosts. If a greater increase of any particular variety is desired, instead of separating the tubers, the plants may be kept whole, the buds allowed to make shoots from six to eight inches long, which can then be taken off and made into cuttings, and be rooted in bottom heat. Several successive crops of shoots can thus be removed, and finally the plant be divided as first directed.

#### PRUNING ROSES—CLEMATIS.

Thanking you for your kindness in replying to questions regarding Roses in your MAGAZINE, please pardon me if I ask for more information. I want, as far as possible, to avoid mistakes this time in pruning and caring for Roses. Will the bending and tying together of the long shoots of the Roses, as you advise, interfere with their blooming? I would sacrifice the looks of the hedge to plenty of blooms, though I would like both. The hedge is seventy-five feet long, and last summer was a gorgeous sight. There are a number of strong shoots three feet in height, that shot up very rapidly in July after the June blossoming. Each shoot had a big cluster of buds at the end. These I broke off when in blossom with a stem, may be a foot long. Each shoot then at the point where it was broken off branched out into a thick, bushy head, and they looked decidedly top-heavy. Now, are these the stems to tie down, and will I cut off the bushy head before doing so? I

want to do everything with regard to plenty of flowers, and would leave them as they are, or tie them or cut them down to attain that object. I have always understood that vigorous kinds, like Jacks, should be sparingly pruned, the tops cut back a few inches and the shoots thinned out a little. Surely, cutting them all back to six inches cannot be called sparingly pruned; but if they will bloom well I will cut them back ruthlessly. I have other Roses standing alone, Mad. Victor Verdier, and others, that also threw up the long shoots, but without the terminal cluster of buds, they look like climbers almost. I will also cut away those in the spring, or will they bear best by leaving them? They are young plants, purchased last spring.

I think pruning Roses is the most difficult part of their culture, and so many contradictory directions are published. ELLWANGER says to prune vigorous kinds very little, and keep the large stout shoots. In the MAGAZINE there is a record of a plant of Jean Rosencranz, which gave no blossoms whatever, and the writer says the reason was obvious, because the season's growth at its base was as thick as his thumb, and a greater number of medium-sized shoots would have given blossoms. Now, what is a person to do? Of course, I do not know anything of the varieties called Jean Rosencranz, it may be a Tea. The MAGAZINE is my stand-by, and I have every number published.

I have a Clematis, similar to the one Henryi, in the last number. It is very large, pure white, with the same satiny lustre you describe. It is circular in form, but is double. I bought it three years ago for a double white; last year it had eighteen blossoms, and was as showy as Jackmanni next to it, with over a hundred. The first dozen that opened had four rows of petals, the others but two, but all were exquisite, they lasted two months and it had three blossoms again this fall. Do you think it is identical with Henryi? I have never given it the least protection.

What time of the year does Clematis Flammula blossom? I shall be very thankful for an answer, however short, to these questions.—SUBSCRIBER.

Bending down the Rose canes and fastening them in a horizontal position will have the effect to produce a number of blooming shoots from each cane. When woody plants begin to grow in the spring, and, in fact, at all times, there is a strong flow of sap to the extremities of upright stems and branches, and an accumulation of it there, which swells the terminal buds at the expense of the lower buds, causing the upper ones to break into vigorous growth, while the growth of the lower buds is feeble, or they remain dormant. Bending down the stem or shoot into a horizontal position causes the sap to flow uniformly throughout its length, and all the buds make new shoots of nearly equal strength. As the Rose blooms on the new wood of the same season's growth, it is evident that this course will have the tendency to increase the quantity of bloom. If too many canes on the same plant are bent down, or too many

shoots are left to grow on each horizontal cane, the blooming capacity of the plant may be exhausted, and the flowers in that case will be small and perhaps not well formed. The number of blooming shoots can be easily regulated by employing a greater or less number of arms, or horizontal canes, or by pinching out some of the young shoots just as the buds begin to push, and when it can be seen what number has started. A strong plant in a well manured, strong soil can have four or five canes of about three feet, each bearing five or six new shoots. In this manner a great amount of bloom can be produced, but not the largest-sized flowers. The largest blooms will be formed on the new growth at the extremities of a few strong upright shoots pruned about two feet high, in the case of vigorous growing varieties. Weak plants, and those of moderate vigor, must be pruned shorter, so as to produce strong shoots.

A double variety of Clematis, similar to the one described has been sent out under the name of "Double White," and is probably the one here inquired about.

Clematis Flammula blooms here in July.

#### PROPAGATING SOME PLANTS.

I and one of my friends have tried growing Honesty, Lunaria biennis, three or four times, with seed bought at the best seedsman's in Canada. Can you imagine why they did not come up? Will they grow in a box in the house? They grow self-sown freely in some places that I know.

In taking slips of Geraniums should flower buds be left on? Should many leaves be left on?

Can you give me a list of plants which slip more freely after air cauterising, what some call "air slipping, i. e., cutting a gash in the plant and leaving it open for some days before cutting it off for slips."

Is it possible to make a perfectly white Tradescantia zebra grow freely?

Floral Monthly reaches me this month prettier, if possible, than ever. Each colored plate deserves framing.—B. A. OXON.

We know of no difficulty in germinating seeds of Lunaria biennis, if they are fresh and good. It is well to sow the seed in the fall, but they may be grown early in spring in the house or in the open ground.

It is customary in making Geranium cuttings to leave on only two leaves, but as good might be raised if more were left on, in which case a little moister atmosphere would be demanded.

Better success is attained in rooting some very succulent plants, as, for in-

stance, those of the Cactus family, if they are allowed to wilt a little after being made. A white sporting branch of Tradescantia will not make any growth.

The propagation of the white branches of Geraniums is often attempted, but never with success.

#### LAVATERA.

I inclose you two blossoms, a leaf and a seed-pod of a plant that grows here very luxuriantly, and bears an immense quantity of blossoms, the plant growing from two and a half to three feet high. We call it Rose of Sharon. My object of sending you these specimens is to find out the real name, and also to know if there are any other colors beside the white and the pink.

Although this has been a cold, wet season here, I never had such flowers before. My garden has been a mass of bloom since the first of July. The Asters are now, September 18, in full bloom, and are larger than any double Dahlia I ever saw, and no part of this country can beat us on Dahlias. The people here are taking to flowers more than formerly, which is very pleasing to me.—M. M. FOSTER,

The plant of which specimens were received is Lavatera trimestris, a handsome Malvaceous plant, much like some of the Mallows. The flowers are either white or pinkish.

#### EXPERIENCE WANTED.

Several of us in this vicinity would like to know how to treat the Taborn to keep it from dropping its buds. We hope somebody will write an article for the MAGAZINE about it. I have searched all my catalogues and cannot find it mentioned. I am afraid that is not its right name; it bears some resemblance to a Lemon tree.—M. J. G., Albion, Iowa.

Our readers who are cultivating Tarnæmontana Camassa will probably understand this to be the plant here inquired about, and we hope to hear from some of them, giving its treatment.

#### THE HARRIS LILY.

Will you please give directions in your next number for the care of the Harris Lily. Is it hardy, if not, how is it to be managed during winter?—MRS. P. H. P., Helena, Wis.

This variety of Lily is supposed to be as hardy as *L. longiflorum*, and will winter well in the open ground. It is best always to cover it with a few inches of coarse litter, or manure, or with leaves.

#### BEGONIA REX.

Please state how to grow Begonia Rex. I have had at different times three plants, and each did well for a time and then died. I did not wet the foliage, and kept the plants free from dust.—B. H. V.

Will not some one who has successfully cultivated Begonia Rex as a window plant give their experience with it for the benefit of others?

### GARDEN INQUIRIES.

At Mrs. H.'s request I drop you the following lines, as she is herself incapacitated from blindness for writing. She has for many years been a subscriber to your MAGAZINE, and though in her eighty-fourth year, has every issue read to her, and derives the greatest pleasure therefrom, being an ardent lover of flowers. In view of the above will you kindly reply to the following inquiries in your next issue.

Mrs. H. is specially interested in Begonias, and has every variety that she has heard of; unfortunately she knows the names of only the following: Begonia venusta, metallica and the rubra, the rest she can only describe in hope that it may suggest their names. One has clusters with small pink flowers; another with same clusters of deeper pink; a third, very beautiful, has bright scarlet flowers, much smaller than the rubra, and characterized by a smaller leaf. Still another has a very large leaf, seems to be green and bronze, with clusters of creamy white flowers. In this connection, will you enlighten her which are the winter-blooming varieties?

Will you also kindly state how to manage the Cactus in winter and summer, also the proper soil for potting, and whether they should be kept in the sun in the winter? She has a Night-blooming Cereus which used to bloom profusely, but for many years has not flowered.

In conclusion, she would like to have some information on the cultivation of Pears. For many years hers have been knotty and dropped their fruit, and when gathered they rot in ripening. She has a few standards and some dwarfs. Two of the varieties, are the Bartlett and the Seckle, both of which have the same taint as all the others. The location of Mrs. H.'s garden is on a damp soil, but in a southern situation, and the land in good condition. By letting her hear from you in regard to these inquiries you will greatly oblige her.—J. L. H., JR., *Pikesville, Md.*

In answer to the inquiries about Begonias we can say that both the varieties Metallica and Rubra, bloom in winter, the variety Venusta we are not acquainted with; the others that are mentioned cannot be identified from the fragmentary descriptions given, though these correspond to the characters of some of the most valuable winter-blooming kinds.

Most species and varieties of Cacti are best suited by being kept dry and warm in winter, giving the soil at that season only enough water to retain a little moisture in it. With the arrival of warm weather a new growth starts, and then a greater supply of water is needed. A light soil, consisting of about equal parts of loam, leaf-mold and sand is suitable for these plants, if desired, a very little old manure can be added to it. The plants can stand in the light and exposed more or less to the sun during the winter.

What is stated about the Pear trees is insufficient to form a correct opinion of their condition. The soil is said to be damp, but whether it is enough so to be injurious to the trees we have no means

of knowing. If the trees have become filled with branches and fine wood they are not in a condition to produce handsome, clean fruit. In this case they require to have their tops thinned out by removing a considerable portion of the small wood, and all young suckers or sprouts, such as often grow out from old branches. The air and light should be freely admitted to all parts of the head of the tree. Pears are often left on the tree to ripen, and in this case the fruit is always poor and soon rots. When the fruit has attained its full size it begins to change color, becoming lighter, and taking on bright hues, this is the ripening state. When the fruit has passed through this change, and by lifting it gently it parts easily from its attachment, it is time to gather it although it is still hard. When gathered it can be placed in a moderately cool, dry room, where it will become mellow and juicy. No variety of Pear should be allowed to remain on the tree until gathered for eating.

### AZALEA AND CAPE JASMINE.

Please, through the MAGAZINE, tell me something about the cultivation and care of Azalea and Cape Jasmine for conservatory. One year ago I had two seedling Cape Jasmines sent me from Texas. They rested all winter, I knew that was all right, started beautifully in spring and budded; when buds were two-thirds grown they dropped off without turning yellow, that was in June; then I put the plants out doors in the pots, and now the leaves are such a light green and look sickly. What shall I do and how ought I to have done and what soil shall I give them. I am very anxious to succeed with them. Most of my plants look lovely now.—MRS. R. R. Aurora, Ill.

In reply to this inquiry, we give below the directions in regard to the treatment of these plants as published in the new edition of the FLOWER AND VEGETABLE GARDEN, lately issued, believing they will be found as full as any we can write in so limited a space, and also, showing something of the character of the many improvements to be found in this revised book of popular plant instructions. The fact of the buds of the Cape Jasmine falling off, indicates a lack of moisture while making their growth.

The Azaleas are found in this country and Asia. The favorite greenhouse sorts are varieties of the Chinese Azalea, *A. indica*. The plants are raised mostly from cuttings, except new varieties, which come from hybridized seed. Though thriving best in the greenhouse,

yet with attention, they may be successfully raised in the house. In the window-garden the Azalea should have a southern exposure, with plenty of fresh air, and not be over-heated. Regular watering is one of the main conditions. It is not necessary to water every day, but never let the plants get entirely dry,



AZALEA.

especially when flowering. Daily sprinkling of the leaves is also beneficial, unless the plants show flower buds. During the time of flowering the plant should be given the coolest place, as the flowers will keep three or four days longer in a low temperature. The flowers are both single and double, and are from two to three inches in diameter, and of a great variety of colors. The plant is covered with flowers from January until April. After flowering the seed-pods will commence to form, and these should be cut off, and the plant prepared for transplanting by trimming. In transplanting remove the plant from the old pot without disturbing the roots. If the soil at this time is too dry, water it thoroughly, so that the plant can be lifted with the ball of earth. One size larger pot is sufficient, and it should have some pieces of broken pots or charcoal, for drainage, in the bottom. Peat mixed with sand is the soil used for Azaleas. After transplanting the plant should be kept in a very cool room, but with plenty of light and sunshine. The daily sprinkling of the leaves must be resumed. Those who would like to take cuttings should improve the opportunity at the time of transplanting, and the cuttings, with a little care, can be easily rooted in sand under glass. During the summer months, or as soon as night frosts are over, the plant in the pot may be plunged

in the open ground in an airy and sunny place. Water should be given the plant as needed, and on hot days this will be at least twice, morning and evening. A few weeks before removing the plant to the house, liquid manure may be supplied twice a week.

*Gardenia florida* is a native of China, introduced into Europe by the way of the Cape of Good Hope, hence its common name, Cape Jasmine. It is an evergreen shrub that grows from four to five feet high. The ovate lanceolate leaves are of a beautiful glossy green. In summer it produces numerous white, fragrant flowers that last a long time. This plant in some of the southern states is quite hardy, and is a great favorite. Farther north it is employed for the greenhouse and the conservatory, and is also planted out in the garden late in spring, where, during summer, it blooms well. In autumn it should be lifted and potted, and kept in a cool part of the greenhouse during winter, at which season it should be sparingly watered. When in full growth this is a shade and heat-loving plant, and while making its growth and opening its flowers in the greenhouse should have a humid atmosphere and a heat of about 65°. Equal



GARDENIA FLORIDA.

parts of peat, leaf-mold, and loam, with a little old manure, make the best soil for it. The double-flowered variety is much raised. Besides *G. florida* there are several other valuable species requiring similar culture. Cuttings of the young, ripe wood root freely with a bottom heat of 75° or a little more, and a moist air. Mealy-bugs are the worst insect pests that infest the plant, but these are easily destroyed by touching them with coal-oil at the point of a little brush or feather.

## QUESTIONS ABOUT MY GARDEN.

My garden is filling my head with queries. I send in a few for answer in the MAGAZINE, for which I will send the renewal subscription in about ten days.

1. My Currant bushes are desperately afflicted with bark lice, similar to those on Apple trees. What is the remedy?

2. I have Mulberry trees raised from seed; out of three, one bears fruit, the others only tassel-like flowers. Is the presence of one of the flower-bearers necessary to perfect the fruit of the fruit-bearing tree. Of course, I would cut them down if not, as I have too much shade already in my fruit yard.

3. Will Portulaca growing in my Rose-bed impede the thrifty growth of the Roses?

4. How can I propagate the Madam Plantier Rose? I have had one seven years, and it never makes any out-growth or sprouts.

5. How is Jasminum grandiflorum propagated?—M. A. WHITNEY, *Grand Crossing, Ill.*

1. The stems and branches of Currant bushes infested with scale insects should be washed with an alkaline solution, and afterwards be carefully looked over, and any insects remaining removed by scraping them off. The best preventive of these insects is vigorous growth; if the soil is kept well manured and properly cultivated, and very old branches removed and their places filled with those of new growth, so as to keep up a slow but steady renewal, there will be but little trouble experienced with scale insects. They rapidly increase on neglected plants. In regard to these insects, Prof. A. J. COOK, the entomologist, says: "I have tried, quite thoroughly, several insecticides. I find nothing equal to the kerosene mixture. Lye and even soap solution will destroy the young lice, but not so surely as the kerosene emulsion. I have also tried kerosene and milk, but do not like it as well as the kerosene and soap. Any kind of soft soap and two gallons of water are heated to the boiling point, when one pint of kerosene oil is immediately stirred in and all well mixed. This is doubtless the best way to prepare kerosene emulsion, and thus prepared it is very valuable as an insecticide. When applied to foliage this does not seem to injure it; in fact, I have sometimes thought it was beneficial to the plant, aside from the effect it had in killing insects. In applying this to the scale lice it should be thrown on with considerable force. This is true in case of all insects. If we turn the liquid on with a sprinkler it does not reach all the insects, at least so as to destroy, while if forced on as a fine spray it reaches all and carries death along with it."

"If it is desired to kill the mature lice in April or early May, when the scales are plainly visible underneath the branches and twigs of the trees we must resort to other means. I have found that by use of a broom with a long handle, dipped in soap suds, lye or the kerosene mixture, I could soon rub off the scales and thus destroy millions of eggs in a very brief time. I did not succeed in killing these mature lice by merely spraying them."

2. It will be necessary to retain one of the tassel-bearing Mulberry trees to fertilize the flowers of the bearing tree. The varieties of Mulberry usually cultivated have both staminate and pistillate flowers on the same tree. A variety having the male and the female flowers on separate plants is undesirable to cultivate for fruit-bearing.

3. A Rose-bed kept in a proper state of fertility by annual manuring, as it should be, will not be harmed by the growth of such a plant as Portulaca over its surface.

4. The plant of Madam Plantier Rose that makes no sprouts can be propagated by laying down some of the old stems and layering some of the branches. The time to do this will be about the first of July, when the new growth of the year will be firm. Should the old stems be quite stiff and refuse to bend sufficiently, some soil can be heaped up about the plant, so that by partially bending the top over, the branches can be brought into place for layering. Make a slit on the under side of each layered branch where it touches the ground, cutting it about half through and pressing some soil into it, and then secure it in position by some strong pegs pushed into the ground beside it.

5. Jasminum grandiflorum is increased by cuttings; if possible, give them the advantage of bottom heat in the greenhouse or hot-bed.

## AFRICAN LILY.

Will you explain the treatment of the Agapanthus, and state its time of blooming?—MRS. H. L. B., *Dorr, Michigan.*

The Agapanthus is a spring and summer blooming plant, requiring rest during the cold season. In parts of the country where the climate is not too severe it can remain in the open the year round, as in many of the Southern States. In pot cul-

ture a light and substantial soil composed of about equal parts of loam, leaf-mold and old manure is adapted to it. During the growing and blooming season it needs a plentiful supply of water, and good drainage, as it is impatient of stagnant water. As often as the pot becomes filled with roots repot the plant into a pot of larger size. In the latter part of the season, as the cool weather approaches, diminish the supply of water, and during winter keep the plant rather dry, and in a light place secure from frost; a light, warm cellar, or the cool part of a greenhouse is suited to it at that season.

#### SINGLE CHRYSANTHEMUM.

This is the second year I have taken your MAGAZINE. I have had no occasion for asking questions until the present time. Last spring I planted some annual Chrysanthemum seeds; they grew nicely. I had at least twenty plants. To my surprise, when the blossoms came out, I had only two plants that produced real double flowers. One was a very double white, the other a double, lemon yellow. All the others were single, homely flowers, even worse than the common field Daisy. The plants grew in good form, and the leaves were beautiful, but the single flowers looked too much like weeds to be allowed to grow in my flower garden, so they were destroyed as soon as they became known. Is this the way they always act? Will seed saved from these double flowers produce double flowers? Or does one have to raise so many plants in order to get a few good ones? There are many kinds of single flowers equal if not better than the double ones of the same class, but to my taste it is not a Chrysanthemum.

I have a slip of Lobster Cactus which has been growing for three months. It seems to be well rooted, and the top has grown some. A friend tells me I will have to keep it three years before it will bloom. Do they require so much time to grow before blooming? How long does their blooming season last? Almost every family in this place has flowers; some have many house plants, some have garden plants, while many have a few of both kinds. The more I cultivate flowers the better I like them, and the more I read the MAGAZINE the better I like it.—E. T., Quaker Street, N. Y.

It is expected that a large proportion of plants of the annual Chrysanthemums raised from seed will be single flowers, and in fact, the single flowers, if really finely formed, are prized as much as double ones; but many of the flowers will be weedy, as complained of by our correspondent, and then the only course to take is to root them out.

It is quite common for year old plants of Lobster Cactus to bloom. Their blooming season usually lasts several months.

#### YELLOW ROSES.

Will you please inform me which are the most hardy yellow Roses for the garden, and which of the yellow Roses I can use for house culture?—MRS. JOHN BODE, Creston, Neb.

Harrison's Yellow and the Persian Yellow are the best hardy yellow varieties. For house culture, such varieties as Yellow Tea, Saffrano, Perle des Jardins, Etoile de Lyon and other yellow varieties of the Tea Rose are suitable. Strong growing varieties, like Marechal Niel, succeed best when given plenty of both root and head room in the conservatory or the greenhouse, but Marechal Niel is also a favorite variety in pot culture, and properly managed gives very satisfactory results.

#### PLEASANT GOSSIP.

Our pleasant gossip with our friends closes for this year with the present number. It has related to a great variety of subjects, and we hope has been of some assistance and encouragement to them. One suggestion that we might make, whereby the interest of this department might be increased, is that our readers who notice or discover anything in their gardening experience should relate it briefly and clearly for the benefit of others. Sketches of interesting objects, too, that might be sent to us, could be used for instructive or entertaining illustrations. Long extended remarks are not suitable, but in the effort to be brief it is best not to be vague; even in asking a question it is often necessary to state more or less of the circumstances in connection with which the inquiry is made. We are continually receiving numerous expressions of satisfaction in regard to the "Pleasant Gossip" department, and hope the coming year to make it increasingly useful. Let all ask questions when necessary, and give briefly their own useful experiences. We hope especially to see more space occupied by those interested in the culture of fruits, whether for market or for private use.

And now we ask every one of our readers who may have felt the MAGAZINE to be helpful, and believe it should be encouraged in the work in which it is engaged to mention it to neighbors and friends, and increase our list of subscribers by at least one new name in addition to each one it now contains.

### A SMALL CONSERVATORY.

I have a small conservatory, five by fifteen feet, off my dining-room. It is ten feet in height, in the form of a bay window on the front and sides, with ceiled wooden ceiling. The windows run from top to the floor and are double, as are also the outside walls. It is shut off from the dining-room by folding glass doors with colored glass transoms. The floor is of Ash and Black Walnut, two by four inch, laid on edge, making a grating opening into a cemented area below. We can thus slush the entire window, the water passing through the grated floor into the space below, thence through a drain into the street. The window is on the east exposure, but it is so shaded by other buildings that we get only about two hour's sun in January and three to four in April. We heat from the dining-room, either by the glass doors or transom. We ventilate the conservatory by means of a two-inch iron pipe through the outer wall, about three feet below the floor in the area below. This permits the fresh and cold air to sink to the bottom of the area, which is about four feet deep. When this air has reached the floor the chill has been taken off, and so does not injure the plants. By opening the transoms above, a strong draft is usually felt at the outside of the two-inch ventilating pipe. We have used the room two years, and can keep four hundred plants in it, if not too large.

Our experience is as follows : The winter of 1881-82 was very cold. We kept the temperature at about 65° or 70° by day, and 45° to 50° by night. Our Camellia dropped its half-opened buds, Primroses and Eupatoriums bloomed well, Geraniums and Carnations poorly, Cobea scandens climbed all over the ceiling and had many blooms in the spring.

The past winter we kept the temperature lower, say from 55° to 60° by day and 45° to 50° at night. It was kept damp by frequent syringing. Our Camellia opened four buds, Eupatoriums, Primroses, Cyclamens bloomed to perfection, Geraniums and Carnations grew well but with few blooms, Passiflora Decaisneana, now a year old, grew well and is running over the ceiling, Rhyncospermum Jasminoides and Campsidium filicifolium, also Pittospermum Tobira grew

well in the last of the winter. On our shadiest side we put some small Ferns, Adiantums, Pteris and Lygodiums, also several Hedera, all are doing well. Of Begonias, the rubra, incarnata rosea, Dædalea, manicata metallica, hybrida multiflora, foliosa and coccinea grew finely, and the four first named also bloomed finely. But nitida alba, Richardsonii, Schmidtii, Dreggii, Washington and glaucophyllum scandens did only moderately well, while Parnellii, subpeltata nigricans, Sandersonii, Lapeyrousa, alba perfecta and ricinifolia did not do well at all, though given the best places. Tradescantia in sorts, Ivy Geraniums, Abutilons, Achyranthes did finely in baskets. Alternanthis all died in January, though well rooted in September. We tried Bouvardias, but they did not bloom well. Clerodendron Balfouri, Poinsetta pulcherrima, Stephanotis floribunda, simply refuse to do anything, so we bid them and Cissus discolor a reluctant good-bye. We tried to coax them by warmest places in the conservatory, but they refused to be comforted.

We smoke thoroughly every four or six weeks, and find no trace of red spider, aphis or green fly. Occasionally find mealy bug on Libonia, or scaly bug on Lygodium scandens or Abutilon Mesopotamicum.

What we wish is for more bloom in winter months, we have no trouble the rest of the year. Can any readers of the MAGAZINE offer anything by way of criticism or suggestion?—S., Delaware, Ohio.

### FLOWERS IN MAINE.

I will endeavor to write about my flowers, though I think it will take an abler pen than mine to do justice to the beauties of my garden, which, for this country place, is considered quite large, being fifty by thirty feet, and laid out in fourteen beds. The seeds which I sowed last spring came up remarkably well, especially the Dianthus Chinensis, the colors of the blossoms being very bright, and beautifully marked. There were seven pinks in one cluster; I believe I never saw so many before, though I've had nearly the whole Dianthus family in my garden at once.

The seedling Dahlias, from seed procured early in May, are in bloom; one

straw-color, tipped with magenta, another pink, tipped with crimson. They are very pretty and new with me. I think Dahlias grown from bulbs are much larger and handsomer than when grown from seed. My Asters, Truffaut's Perfection, and the New Dwarf, are beautiful. A lady once wrote to me, asking "What I did to my Asters to keep the bugs off." I told her I never had been troubled with bugs on Asters. I think they need rich earth, and I water them once or twice a week with liquid manure. I am repaid for the labor in abundant blossoms. Have had nearly fifty Gladiolus. I wish I knew the name of one, the flowers of which are of a deep rose-color, with pink and white markings. The flowers are large, and very close together—eighteen on one spike.

Five beds in my garden are bordered with Sweet Alyssum; one with Miles' Spiral Mignonette; one with Candytuft, and one with white Pinks, which make the air delightfully fragrant. Soon the frost king will be here, and we must get our plants repotted for the window-garden. I began to do this a fortnight ago. I hope to have my Geraniums bloom in winter. I set out slips in June, and have nipped off all buds from them. They are nice, thrifty plants now, and I think will flower.—MRS. C. G. FURBISH, *Elliot, Maine.*

#### RED SPIDER AND OTHER NOTES.

I have been thinking of writing to you for some time. I am in despair. Last fall I sent to you for two dozen plants; you sent me twenty-eight, and for a time they all seemed to be doing well. In the spring I noticed a few red spiders on my plants, but as the weather was very warm and damp, I congratulated myself that I would soon be rid of the pests, and forthwith put my plants out in the garden on a stand, and I don't think we saw the sun from that time for two weeks; it was misting and drizzling all the time, and, would you believe it, when I examined my plants, those spiders were just as healthy and hearty as ever. Well, I concluded to take them through a course of medicine. I did not give them Allen's Anti-fat, but I dosed them on Tobacco-tea, and they seemed to thrive on it; then I gave them kerosene and milk; the poor plants began to suffer,

but still the spiders flourished. I finally procured a fumigator, but only succeeded in burning my fingers with it, and now, to-day, October 17th, my plants are nearly all dead. The Morning Glorys, Cypress Vine, Tomato plants, Peach leaves, and even the Grass on the ground, being literally covered with the insects. If you can suggest anything else that I can do, or if any of your correspondents have had similar experience, and have found a remedy, I would be glad if they would make it known.

I am going to renew my subscription soon, for, like SUSAN POWER, I don't think I could do without it. I am very much pleased with *Good Cheer*; the style and diction is chaste and refined, and all together, is an excellent paper for the young people.

X. Y. Z. expressed my sentiments throughout. I have had the same trials from flower fiends, but did not know what to call them, as flower-beggars seemed too mild a term. Sometimes my patience has almost given way, notwithstanding we are commanded to possess our souls in patience, and if it be possible, to live peaceably with all men.—MRS. J. V. RHODES, *Columbus, Ga.*

#### LABOR AND HONOR.

It may be of interest to some of your readers, professional or amateur culturists, to learn that in this new country we have two representative men, one a member and the other an ex-member of our responsible government—ministers of the Crown—who have been, and are still, "clod-compellers." Hon. Thomas BENT, M. L. A., for Brighton for many years, is a practical market-gardener, bringing in and selling his own produce; and the Hon. J. F. LEVIEW, Minister of Mines and Agriculture, is our largest Onion farmer, in fact, is "the" Onion grower. So, at any rate, that goes to show that the useful and productive arts are appreciated amongst us.—S. W. V., *Melbourne, Australia.*

A LARGE CASTOR-OIL PLANT.—I think I have a very large Ricinus, (Castor-Oil Plant.) It measures fifteen feet, three inches in height; stem ten and one half inches in circumference; leaves thirty-one inches across, each way.—A SUBSCRIBER.

### A GARDEN JOURNAL.

December 1. Sifting soil for potting purposes. Planting out white Mulberries to raise for silk worms. Potting off young Ferns raised from spores.

3. Banking up with manure the trees and shrubs that were transplanted the 21st of last month.

4 and 5. Spurring in small fruit trees. Cleaning away brush and making Peasticks of the largest for next spring's use.

6. Wiring Orchids on blocks.

7 and 8. Putting in some Heath cuttings to strike. Throwing out the Chrysanthemums that have finished blooming, reserving one plant of each variety to take cuttings from. Shifting the plants in the greenhouse, and making tidy.

10. Putting new wires on some of the Orchids, baskets and blocks, and re-labeling them.

11. Removing the dead leaves from the vines in the grapery, and clearing out the house. Planting Chicory roots in larger flower-pots, and putting them in a warm, dark corner in the cellar, near the furnace, so as to have Chicory salad for the holidays.

12 and 13. Applying lime, charcoal, and bones to the grapery border; I mixed six bushels of fresh slaked lime, and the same quantity of charcoal, with five hundred pounds of crushed bones, and spread the whole evenly over the grapery border, inside, and dig it in with a fork. The lime and charcoal will sweeten the soil, and the broken bones give considerable nourishment to the vines.

14. Placing coal-ashes in some walks in the vegetable garden, to serve as a bed for a covering of gravel.

15 and 17. Putting in Chrysanthemum and Carnation cuttings.

18. Repotting Master Christie Geraniums, Chrysanthemum frutescens, and other plants for winter blooming.

19. Tying up blooming plants of Begonia, and arranging plants in the greenhouse. To-day I have cut Calla blooms, Carnations and Roses, and put them away in the root cellar, where it is cool, to keep them for Christmas. The stems are put in a dish of water. The flowers will keep fresh much longer in that condition than they would in the greenhouse.

20. Potting some Dandelion plants to grow and blanch for salad.

21, 22, and 24. Pruning Grape-vines in the cold-grapery, and cleaning off the loose bark, and laying down the vines.

26 and 27. Putting new vines in the grapery to replace broken ones. It is a good time to do all such work. The grapery is now being repainted inside and out; the wires are painted to prevent rusting.

28. Washing the leaves of foliage plants with soap and water, to remove dust and scale insects.

29 and 31. Still sponging the plants; using a little turpentine, applying it with a paint brush, to kill scale insects, but using it cautiously for fear of burning the foliage.

### A WORD FROM COLORADO.

DEAR MAGAZINE:—Thinking a word from this corner of the world may interest your readers, I will give you a little of my experience in floriculture. The first of April, this year, we had not even a fence, a little piece of the most unpromising looking ground, twenty-five by forty feet; not even a weed would deign to grow in such a place; but the thought of having to live through the summer without flowers was unbearable, so we got a man to spade the hard ground, then had some good earth put on top, and a fence, and then began the work of making our flower garden. I laid off the ground in a way that seemed prettiest to me,—part of my design was from an old catalogue, and part original—and my little boy of twelve years carried rocks from the mountain back of our house to edge the beds, so they are there to stay; and now, at this date—August 12th—our garden, in its full fluorescence, is a charming contrast to the barren soil it was when we began; seedling Verbenas cover a space of three feet square, and the Phlox Drummondii, what a salamander it is; it revels in the sun that burns up the Geranium blossoms; and our lovely Sweet Peas—they alone have more than paid us for our work; and I have only told you the half, for our work of this spring is only a repetition of that of three years ago in Topeka, Kansas, where we began anew, as here, and now our tenant writes us from there that the garden is lovely with flowers; when we left there last summer it was running over, and though we can't see them, we

know just how it looks, and we know our friends and neighbors enjoy them, and we like to think we have made one little spot in the world pleasanter for our having lived in it. And now I will trespass no longer on your valuable time, only I wish to say, with some others of your correspondents, keep the large Geraniums for winter blooming. I tried it last winter and was never without flowers. I might say much of the beauty of the flora of this part of the state, but have already made my letter too long. With kindest wishes for your future prosperity, I am yours truly, MRS. M. H. PATTISON, Durango, Colo.

#### WHITE LICE ON ASTERS.

In looking over your gem without price, your MAGAZINE, I found in the May number that one of your subscribers is anxious about the white lice on her Asters. There is one remedy that will effectually banish them. Get a barrel of shells, make a wood fire round them, and burn them till red-hot, say blood-red, and then put half of them into a large barrel, and fill it up with water, and two pounds of chopped Tobacco; in eight hours it will be slacked, the same as lime. Throw out a part of the mold in the Aster bed, to one side, and then mix the barrel of slacked shells well through the rest of the soil in the bed, and afterwards fill the bed up with fresh earth, and a load of fine ash-cinders, sifted through a coarse sieve. As a fertilizer the shell-lime has no equal, and will repay any person who is interested at all in house or out-door gardening. The other half ought to be slacked at the same time in another barrel, and be mixed with mold or old, decayed sods, with about fifty or seventy-five pounds of fresh fish mixed, and a couple bags of charcoal dust, and kept ready for potting Fuchsias, Zinnias, Roses, Begonias, and winter-flowering bulbs, besides, if this stuff is used there will be no green or white lice.

We have quite a variety of wild flowers here, and some of the finest Ferns in the world. Although taking your MAGAZINE, I have no place of my own, as yet, still, I like flowers, and amuse myself by making rustic hanging-baskets and stands, and filling them for the neighbors. I am sorry that I never had

the good fortune to get your MAGAZINE before this year, but as long as I live, after this, I shall endeavor to have it; by its use any person can become a good gardener, and make himself very useful. I am trying everything that is best, and shall give due notice of success or failure. If your Cambridge friend is successful in my treatment, I hope she will let you know the results.—WM. C. STRATTON, Port Blakely, Wash. Ter.

#### SPIRE LILY.

Galtonia candicans has done finely with me this summer. Expecting to move all my plants in early fall, I did not set this bulb in the border, but in a quart tin can, and kept it at the north side of the house. I found it doing best when well watered, so plunged the can in a pail of water at least once a week, besides sprinkling every evening on sunny days, and occasionally picking off the soil in the top, and filling up with rotted manure. The way the plant grew was a wonder to all, and the bloom-stalk went up and up, until now (July 19th), the top buds are opening. Thirty-seven flowers in all, and of a size a little larger than described in the MAGAZINE. The first flower opened July 2d, and hung over a week fresh, then withered, and is now ripening seed. I think it best to cut away every flower as soon as it begins to wither. The plant is entirely new, here, and has called forth many exclamations of delight and surprise. If the flowers were fragrant, no more could be asked, but we cannot expect every virtue in one plant, and the pure white bulbs should satisfy everyone.—ROSINA A. HOLTON, Smithville, Ill.

#### POLISH FOR PINE WOOD.

A wash of one part nitric acid in ten parts water will impart a stain resembling mahogany to pine wood that does not contain much resin. When the wood is thoroughly dry, shellac-varnish will impart a fine polish to the surface. A glaze of carmine or lake will produce a rosewood finish. A turpentine extract of alkanet root produces a beautiful stain which admits of French polishing. Asphaltum, thinned with turpentine, makes an excellent mahogany color on new work.—*Canadian Magazine*.

### HOUSE GARDENING.

When so much ignorance and prejudice exist in regard to the healthfulness of keeping plants in the house, it seems as if too much light cannot be thrown on the subject by the MAGAZINE readers who have made observations in regard to it. Having long had the care of an invalid and children, I can speak with certainty of the unqualified benefit arising from house gardening. That the most beautiful part of creation should be dangerous for us to have in our houses, is too absurd to think of, unless we believe Satan rules our world and would torment us as much as possible. Your Hoosic correspondent, a few months since, told us that the plants purify the air. Certainly they do. They are the nearest perfect ventilators we have, and would solve the problem of school ventilation, now too mighty for the wise heads of the "committee." The earth in the pots is also a great purifying agent. With no ventilation, excepting from cracks in windows and doors, in winter, I can keep the air pure and sweet only give me plants enough.

Several years ago, our MINIMUM was sick in one of our rooms kept for plants. It was pretty well filled with them, having besides many large pots, firkins, &c. A sink on legs, over six feet long, was filled with plants. MINIMUM said it seemed as if she was sick in a flower garden, for she was nearly surrounded with them. The other children were also sick at other times, and each and every time the air was sweet and pure, which never was during fever without much trouble, before plants were kept in the room. The air in a room constantly occupied by an invalid is very impure, even pernicious; but put plenty of plants in that room and an improvement will soon be perceived. I have tried it long enough to know it.

Consumption is called contagious. Perhaps plants would remedy all this danger; I have no doubt of it. Too much cannot be said in their praise as purifiers. Nothing need be said regarding the comfort they give to the invalid in whispering hope of renewed life.

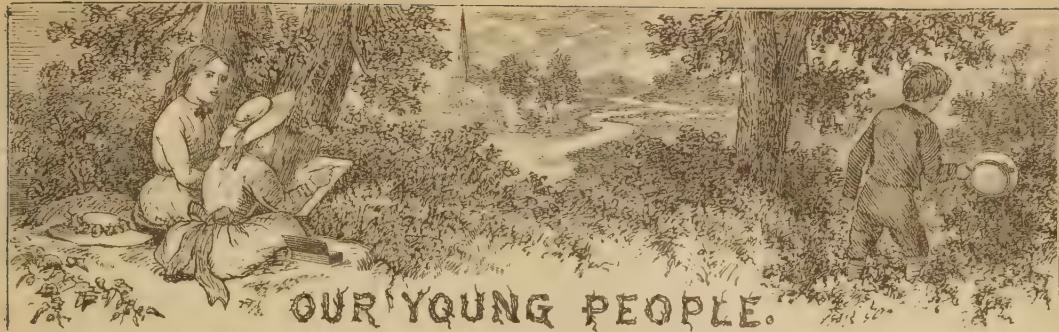
Now for sleeping rooms. The greatest objection to plants there is that a healthy person or persons should sleep with the window open, more or less, till the thermometer gets to zero, and the plants

would be the ones to suffer. Sleeping with the windows open will put roses into the cheeks. I never dreamed that any plants were "unlucky," unless stolen or taken from a cemetery. Persons who are afraid of "unlucky plants" should correct the liability to danger by keeping a good stock of "lucky bones" in the drawer. Perhaps it would be a good test, before employing a physician, to examine him in regard to his opinion of plants in the house. Then, if he was deficient in "botany, chemistry and common sense," let him severely alone. No doubt, many persons have thrown away noble Oleanders because the cry has been repeated so often that they are poisonous. It is nonsense. We do not want to eat them, though the mealy bug feeds sweetly on them, grows fat and increases enormously. The value of house gardening cannot be over-estimated. House plants were among my earliest companions, and I have lived with them ever since. Without them our long winters would, to me, be almost unendurable.—BOSTON SUBURB.

### MOORE'S DIAMOND.

This is the name of a new white Grape that is soon to be offered for sale. It is a cross between the Concord and the Iona, and has now been fruited in this vicinity about six years. The vine is a vigorous grower, with thick, healthy foliage. The clusters are about the size of those of the Concord; the berries not quite as large as the Concord berries; quality said to be sprightly and excellent; ripens at the time of Hartford Prolific. It was originated by the skillful hybridizer, JACOB MOORE, who also produced the Brighton, and other fine varieties of Grapes, and the Ruby Currant.

The editor of the *Gardener's Monthly* received a sample of this variety from a correspondent in this city. He writes of it as follows: "The bunch weighed five ounces, and though the quality was very good, we had our doubts about its being superior in any considerable degree to the many good white varieties now known. But when we saw the date of the letter, September 16th, which is very early for Rochester, and remember that we have no very early white Grape, we are inclined to think this will prove a valuable addition to a list already large."



## OUR YOUNG PEOPLE.

### STELLA RAY TO HER AUNT.

My Dear Governess:—I must call you that just once more; for all the morning my mind has been dwelling on the good old times when you really held that position toward brother Will and me, before Uncle George had ever seen you. Well do I remember how his eyes followed you on that first visit after he came to us; and how you seemed to avoid his presence in every possible way, until I was half vexed at you for daring to seem as though you did not like him; and how he was piqued into assuming utter indifference, and how you then froze up entirely; and what a misery it was to me to have you two, whom I so loved, under the same roof, and yet seeming as far apart as the poles from each other. How well I remember, too, that I decided at last that it was my very duty to act as arbiter between you; and how first I took occasion to say to you in an off-hand-sort-of-way that anybody caring for the good will of our family needn't expect to hold it by pretending to feel superior to Uncle George, for he was one of the very best and smartest men that ever lived; and how, then, you laughed outright, such a merry-hearted laugh that I felt very small indeed, but not quite extinguished; and how I went straight to Uncle George and told him how perfectly splendid you were in every way; and how he answered in a hard, matter-of-fact tone that it was very fortunate that I liked you, for, were it otherwise—with my strong prejudices and dislikes for people—you could do me no good; and how I flinched at that, and hurried to say—though just ready to cry—"But I want you to like her, too, Uncle George," and how, then, he growled out: "Humph, you little goosey; go along to your lessons; my liking or disliking can

make her no better teacher; and that's what she is for." And well I recall how my impetuous blood tingled to my right hand, and I actually gave him a stinging slap on one ear, and rushed from the room, avoiding him for two days after, the most wretched of mortals.

All this, and much more, has been running through my head this morning; perhaps because I knew that I was to write you a long letter after getting papa off to see his patients, and attending to such household matters as my dear methodical mamma assigns me as my share of domestic duties. You taught me, yourself, to be observant, and I can but notice how these duties have been given me in regular rotation, until, now, I have about completed the round of domestic training, having been most adroitly "managed" without ever suspecting it, for mamma has never allowed anything to seem like drudgery, but has inspired me with some special interest in each department before I had quite reached its practical accomplishment. This shows what intelligence and tact on the part of the mother may accomplish, which, perhaps, sounds like over-wise talk in me; but no one knows better than yourself what a restive child I used to be, so impatient of restraint when desiring to join other girls in their aimless walks on the street, or in the evening entertainments kept up until a late hour; or anything, in fact, to make an excuse for displaying themselves in public, and frittering away their time; and now I can think over the names of the very girls whom I used to envy for the "good times" they seemed to have, and I would be unwilling to be classed among them. Three of them have brought great trouble upon themselves and relatives; two, by marrying before having

left school, unbeknown to their friends, the other one, by imprudent conduct which is no longer a secret.

This fact, added to a pleasantly-serious talk which papa and I recently had, opened my eyes, and led me to retrospect my past life, and to see more clearly than before what my mother has been to me. I can but admire the firmness with which she enforced the restraints which both you and she approved when you were with us, and the tact she has undoubtedly used to employ me in her interests, while all along planning for me the most delightful recreations, surprises and visits, at just the most fitting times; for all of which I most sincerely thank her.

Speaking of youthful indiscretions reminds me how papa recently called my attention to an instance of the kind now widely known, because of the lady's husband having been brought into prominence as a political rival. Papa wishes all young people would note how one early mistake—neither a vice nor a crime, though a grave, social indiscretion—may be dragged to the surface in cruelly exaggerated form after many years of beautiful home-life and christian example. Mamma says the latter fact is sufficient to justify the state of feeling developed by a letter from the lady herself to a friend of mamma's, in which she writes;

"You may be sure I shall not soon forget the outspoken indignation of women in my behalf."

I repeat this to you because you will be glad to get this expression of feeling direct from the lady herself.

During the year now nearly passed, I think I have almost overcome that spirit of romancing about what I was going to be and to do in the future. To check this tendency you tried to impress upon me that only the present time is ours to make the most of, the past being gone, and the future never in reach. But my fancies were so interwoven with my daily life that when I was restrained from indulgencies outside of home, I imagined myself a repressed Cinderella, who would, yet, by some magic of circumstance, astonish everybody. And when I read of heroic deeds of women, I resolved to be a Joan of Arc, or, at least, a Grace Darling. And when you erased from my compositions their high flown

sentences, telling me at last that my gift of language should never tempt me into lofty phrasing upon simple themes, I was fired with the idea that if I really had a "gift of language," I should be a writer of books and amaze the world. But now I have no such ambition. If other people will only write the books I shall be content with the reading of them. I speak of this because you will be glad to know that I am no longer building castles in the air. Old Mr. Haven and his sister, (whom you will remember as the English couple who used to make a pet of me,) were always interested listeners to my plans and aspirations. But yesterday, when I was there helping to make their English "plum-puddings" ready for Christmas, I found they had been shrewd enough to rate my schemes at their worth, for when I mentioned a very practical project I have in mind, Miss Haven remarked:

"And so you're a buildin' them there scaffolds in the wind agin."

Poor woman! with much native intelligence, she never learned to read, and often gets her quotations wrong. We made and bagged four of these puddings, and when I left, they were boiling in a clean wash-boiler, "there to remain the rest of the day and half the night," Miss Haven informed me, and added, "But Richard, he'll set up with 'em."

It seems strange how lavishly they can spend money on something to eat and be so penurious in other directions. Miss Haven's house-plants are the same as of yore—always one Jerusalem Cherry and various kinds of sweet-scented herbs—nothing else. She has a perfect mania for aromatic plants. See makes a kind of soup into which she puts "a pinch" from each pot, and when her brother eats it, he says it takes him back to his "mother's 'appy 'ome in hold Hengland."

My dear mamma, as usual, is planning to have some one in the house during the holidays who otherwise could have no holiday. This time it is to be Mehitable Cutter, the seamstress, you remember, who had a stroke of paralysis while sewing for us when you were here. She has not recovered her voice nor the use of her left arm. We hear that she often writes on her slate for her poor old mother to read, that she wants to see Mrs. Ray and the children. I never

liked the woman, but suppose I must not think of that now. I wonder what mamma's crown in Heaven will be like.

Just now we are feeling anxious about papa. The trouble in his right hip, caused by that Confederate bullet, seems to be renewed of late, causing him much loss of sleep. He misses brother Will very much, but does not regret having decided on a college course for him. I try to take his place in some respects, having sometimes driven the rounds of his patients with him, to relieve him of the care of the horse. Yesterday, he told me that for various reasons he does not wish to send Harvey and Effie to the public schools at present, and proposed that I should give them three hours' instruction each forenoon, with the understanding that I am to be relieved, meantime, of other responsibilities. I was silent at his proposal, and he looked disappointed. Of course, I shall do it, though anything else seems easier, shall take time to bring my mind to it, so that when I do consent my heart may go with it, if possible.

Before Will left home, I wrote you of my unfortunate remark in the family, that I intended to commence a journal with the new year, but I did not tell you of the jocose remarks that were made at my expense. Even grandpa Starr said "Humph!" while papa suggested the weather as an unfailing topic for comment in the absence of something more original. It seems that Will caught at this idea, for on my seventeenth birthday—just past—I received as a gift from him a "Centennial" thermometer, set in a beautiful frame, and surrounded by various symbolic devices. A card on the back reads—"This will furnish weather-notes for your journal." Of course, Will thinks this a good joke. However, if the elements keep up as much commotion in the future as during the past year or two, I might easily furnish my journal each month with very spicy reading, and write of nothing else.

Since you so urgently insist that monthly installments of my jottings shall be sent you, I suppose it must be as you desire; and it will not be the first time I have obeyed your dictates, knowing that I can always trust your judgment. I shall be too busy to write you again before the holidays, so, wishing you a

Merry Christmas when it comes, I remain your affectionate neice, STELLA.

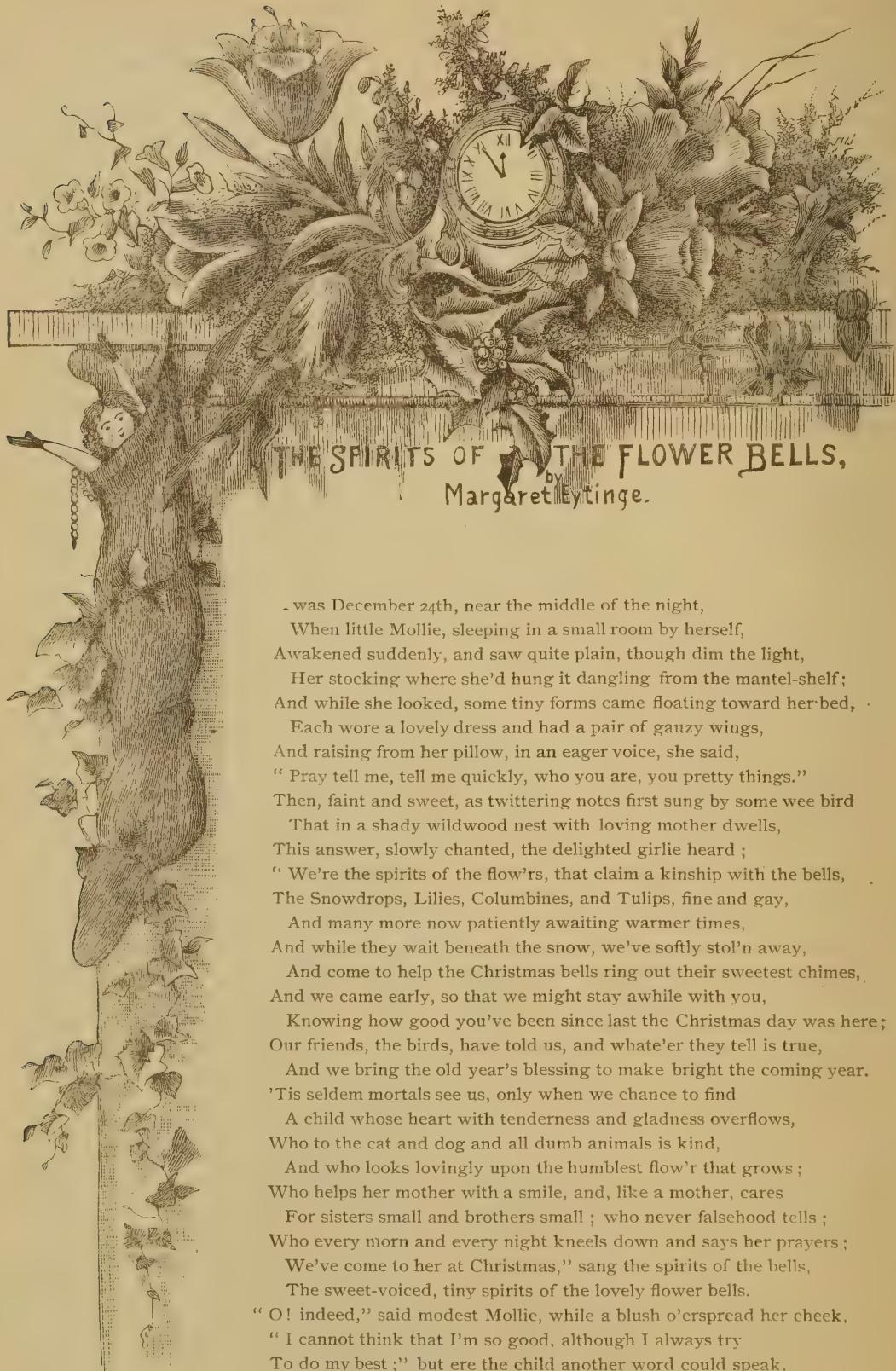
NOTE.—"Aunt Marjorie" would like to say to Vick's Young People that, since learning there is another "Aunt Marjorie" connected with an eastern publication, she has decided to write over her own name hereafter, thus becoming personally responsible for whatever appears above it. A few written words from unknown friends received in the past, indicating that some word of hers has carried help or cheer into the homes of flower-lovers, has made her thankful unto tears. We will hope that Stella Ray may prove to be a character of sufficient interest to incline us not to lose sight of her the coming year.—MARIA BARRETT BUTLER.

#### SWEET-SCENTED WOODRUFF.

A German friend identified in my garden, with delight, an old, familiar acquaintance of his childhood's home, near the Rhine, a pretty, white-flowered, low, perennial plant, which we call Sweet-scented Woodruff, and which he called Waldmeister, a name meaning the master or guardian of the forests, as the English name means reeve, being old English for a guardian office, as shire-reeve, a sheriff, port-reeve, a keeper of the port. It seems that in parts of Germany leaves and blossoms of the Waldmeister are gathered, placed in a bowl, wine poured over them, which extracts from them a very agreeable flavor, and, with sugar, makes a favorite drink for gathered friends in evenings of the month of spring flowers. Here we use the plant for a May celebration, too; when planted on graves, it covers the mound with a beautiful mantle of green, studded with star-like flowers of pure white, in their prime at Decoration Day. I am not sure of the exact botanical name of this plant. Its leaves are in regular star-like whorls, like those of Galium and Asperula, but are not rough on the edge, and there are seldom, or never, eight in a whorl. The French call it the little Lily of the Valley, *petit muguet*.—W. The plant is Asperula odorata.

While examining the extensive herbarium of Dr. MEUNCH, of Basle, Switzerland, a few years since, a small slip of paper lying beside the specimen of this plant, bore the following words accredited to "Kirschleger, Flora of Alsace":

"It is with this plant in flower that, in the Rhine country, the famous May-drink (Maitrank) is prepared, as an infusion in boiling red wine."—ED.



THE SPIRITS OF THE FLOWER BELLS,  
by Margaret Eytinge.

It was December 24th, near the middle of the night,  
When little Mollie, sleeping in a small room by herself,  
Awakened suddenly, and saw quite plain, though dim the light,  
Her stocking where she'd hung it dangling from the mantel-shelf;  
And while she looked, some tiny forms came floating toward her bed,  
Each wore a lovely dress and had a pair of gauzy wings,  
And raising from her pillow, in an eager voice, she said,  
"Pray tell me, tell me quickly, who you are, you pretty things."  
Then, faint and sweet, as twittering notes first sung by some wee bird  
That in a shady wildwood nest with loving mother dwells,  
This answer, slowly chanted, the delighted girlie heard ;  
"We're the spirits of the flow'rs, that claim a kinship with the bells,  
The Snowdrops, Lilies, Columbines, and Tulips, fine and gay,  
And many more now patiently awaiting warmer times,  
And while they wait beneath the snow, we've softly stol'n away,  
And come to help the Christmas bells ring out their sweetest chimes,  
And we came early, so that we might stay awhile with you,  
Knowing how good you've been since last the Christmas day was here ;  
Our friends, the birds, have told us, and whate'er they tell is true,  
And we bring the old year's blessing to make bright the coming year.  
'Tis seldom mortals see us, only when we chance to find  
A child whose heart with tenderness and gladness overflows,  
Who to the cat and dog and all dumb animals is kind,  
And who looks lovingly upon the humblest flow'r that grows ;  
Who helps her mother with a smile, and, like a mother, cares  
For sisters small and brothers small ; who never falsehood tells ;  
Who every morn and every night kneels down and says her prayers ;  
We've come to her at Christmas," sang the spirits of the bells,  
The sweet-voiced, tiny spirits of the lovely flower bells.  
"O! indeed," said modest Mollie, while a blush o'erspread her cheek,  
"I cannot think that I'm so good, although I always try  
To do my best ;" but ere the child another word could speak,  
" 'Tis Christmas morn!" rang gaily from a peal of bells near by,  
And lo ! in one brief second more she found herself alone.  
With not a sign, save fragrance rare, of dainty flower-elf ;  
As suddenly as they had come so suddenly they'd flown,  
And she only saw her stocking dangling by the mantel-shelf.

### THE CHILDREN'S GARDEN.

One of the best of all ways to keep children out of mischief is to keep them busy. Give them something to do, and teach them how to do it well, and you will be helping them to form a habit which will be of great benefit to them later in life. It is not a difficult matter to get children interested in work if you will take a little trouble to talk with them about it and show them that you are interested too. If they do not understand certain things about it, explain them. Never let them go on with anything ignorantly. Talking over work with them gets them into a habit of investigating and learning the "whys and wherefores" for themselves. When boys or girls ask for information never put them off by saying that "children should not ask questions." Children should ask questions. That is the principal way in which they gain a great deal of the information they need, for they cannot acquire it all by "keeping their eyes open," as many persons seem to think.

But this is not what I wanted to talk about. I have had a little class in gardening the past summer, and I am so well pleased with it that I propose to tell the boys and girls about it, and perhaps they will get up classes of their own. Such a thing can be done in almost any neighborhood. I had some seeds and plants that I had no use for, and one day I gave some to one of the neighbor's children who was fond of flowers. She thanked me for them, and said: "I don't know how to take care of them, and mother is too busy to show me. If you'd let me watch you, may be I can learn how." Of course, I was glad to be watched in that way, and as I worked in my garden I took pains to explain how and why certain things were done, and she became so interested that she brought some other children with her to watch. I gave some seeds and plants to all of them, and encouraged them to start a little garden. I told them that their plants must be well taken care of, or they would not amount to anything. If they gave them proper care, they would afford them a great deal of pleasure, and others as well, and they would have the satisfaction of knowing that the garden was their own. Children are always pleased with a sense of

responsibility and proprietorship, and they were enthusiastic over the idea. The boys were as much interested as the girls, and agreed to perform the hardest part of the work if they would take them into partnership in their gardening operations. The consequence was that the children of half a dozen or more families had gardens of their own this summer in which flowers and vegetables were grown, and grown well, I am very glad to say. I suggested, one day, that they might have a little "fair" in the fall. The idea delighted them, and they tended their gardens faithfully all summer, with the fair in view. It was held about two weeks ago in a neighbor's shed, and almost all the neighborhood visited it. It was very creditable. The exhibitors were important persons, I assure you, for it was their fair, and the fair of the season, in their opinion. Some of us grown up children arranged premiums for the exhibits, and we contrived to give nearly all a prize of some sort, thus encouraging them to make greater efforts next year. Some of the flowers would have done credit to a professional, especially the Asters, of which there was a great show. One little girl devoted her whole attention to a bed of Pansies, "'cause they seemed so folksy," she told me, and she had a plate of them on exhibition which outdid anything in my garden, greatly to her delight.

Now, these children have learned a good deal by their gardening. I took pains to explain things to them, so that they might work understandingly and intelligently. They have become interested in their work, and an interest of this sort is not likely to die out, for the more we work among flowers the more we love them. They are pure, ennobling companions, and I believe they will make the lives of these children better as well as brighter. They have kept the little fingers that tended them out of mischief, I have no doubt, and the work done has helped them to form industrious habits, and has been good training for larger fields of labor.

It would be well to study botany during the winter, and get the rudiments well mastered by next spring, so that the study of it can be carried on with their gardening next summer. I must tell them about this.—EBEN E. REXFORD.



There's a queer little monarch, King Frost is his name,  
His rule is despotic, and far spread his fame ;  
In the stillness of night he works with a will —  
He binds up the river, the stream and the hill.

Then he shuts down the lakes as tight as can be,  
With a mirror of ice, a wonder to see.  
All the leaves he has snipped from the twigs of the trees,  
But instead hangs a fringe of diamonds on these.

The tops of the mountains he decorates too,  
For he tips them with white against the sky's blue,  
Not contented with this, to the clouds he then flies,  
And the snow flakes sifts down from the cold gray skies.

He stops not a minute, but works while he may —  
He knows he has only the winter to stay.  
Thus, what'er thou may'st do, learn the lesson here taught:  
The Frost King's still work with great power is fraught.

Nature teaches us this, that stillness is power;  
Falling snow gives no sound, nor the opening flower,  
No voice from the sunbeams, though brightly they shine;  
Yet each does its work with stillness sublime.

M.E. Whitemore.



## THE MAGAZINE AND GOOD CHEER.

Our pages could be filled from beginning to end with letters of compliment and satisfaction in regard to the MAGAZINE, but we have no occasion to publish them for our own readers. The following letter, however, bearing testimony, as it does, jointly to the MAGAZINE and *Good Cheer*, is now so opportune that we give it place for the sake of those who may not yet have decided to order *Good Cheer* in connection with the MAGAZINE for next year. We are satisfied that *Good Cheer* would be a welcome visitor in the home of every one of our readers if its acquaintance should once be made, and hope the cases will be rare where it is not ordered. In reference to the time of issue of *Good Cheer*, as noticed by our correspondent below, we will say that it is sent out purposely at the middle of each month, in order to reach its readers when they may have more leisure than in the early part of the month, when their time is almost certain to be occupied more or less with other publications.

"Taking only in consideration the colored plates, which regularly accompany each number of your worthy MAGAZINE, and which are executed in the finest style, saying nothing of the interesting essays, practical directions, clear and useful descriptions, and true and beautiful illustrations of almost every thing which tends to the vegetable and especially to the flower garden, surely your MAGAZINE is one of the best on this subject, and should find a place in every family library. The longer and oftener one reads it, from the first to its last volume, the more he is convinced that he will never do without it. With pleasure, therefore, I subscribe again for the next year, 1885, for your MAGAZINE. I do so with more pleasure, also, since you again present to your subscribers the same generous offer as last year, in having sent to them *Good Cheer*, a paper of which I found only one fault, that its numbers arrived very late during their respective months, for instance, I did not yet receive the November number, a fault which one feels the more the more anxious he is to get soon the next number of this otherwise so excellent and pure family paper. Please send me, therefore, for next year, with your MAGAZINE, the welcome *Good Cheer*, for which find enclosed draft for \$1.25."—P. A. S., O. S. B., St. Vincent College, Beatty, Pa.

In our advertising pages may be found a full list of all the publications with which we offer to send the MAGAZINE at low rates. This list includes some of the best and most desirable journals in the country, and suited to the tastes of a great variety of people and of all ages. Please examine carefully our offers before sending your subscriptions to the leading Weeklies and Monthlies.

INDEX TO FERNS.—The index to Ferns, in this number, placed at the end of the index of the volume, is a contribution of Mr. S. H. PARSONS, of Montreal, Canada, who, in a note to us, says: "For my own convenience, I was led, some time ago, to make an index of all references in the MAGAZINE to Ferns. For this purpose I read very carefully through all the volumes, and have since verified my notes. This index will, very likely, prove useful to many other

readers, and I send it to you for publication, if you find it available or suitable." In further reference to it, he says, that it "is a complete index of the references to this subject in VICK'S MAGAZINE from the beginning to the end of the present volume. To those possessed of full files of the MAGAZINE the index will be very valuable, and it will show new subscribers how fully the MAGAZINE treats an important and interesting subject." Mr. PARSONS will please accept our thanks for the work he has so well done, and we have no doubt many of our readers will mentally repeat our thanks for the assistance it will afford them.

THE ESSENTIALS OF BOTANY.—With the above title, Dr. BESSEY has prepared a volume which, in his preface, he speaks of as a "Briefer Edition" of his well known work on the same subject. In this volume he says, "the attempt has been made to present the essentials of modern botany in considerably less difficult language than has hitherto been usual in books of this grade. Many of the terms now in general use in the larger works are here anglicised, while English names have very generally been given for plants and plant groups. The sequence of topics and the general mode of treatment pursued in my larger book, published in 1880, are here followed, with such changes and modifications as are demanded by the progress of the science since the original manuscript left my hands. In many cases the paragraphs have been carefully revised, while in others they have been entirely rewritten." A very prominent feature of this work is formed by the numerous "practical studies," which indicate the conduct of experiments and observations to verify the principles of the science, and as a guide to similar original researches by the student himself. With the aid of a teacher, and by the use of a good compound microscope and other appropriate accessories, a course of botany, as delineated in this work, would prove of the highest interest and value. Advanced students will find no difficulty in pursuing the course by themselves. This volume is published as one of the American Science Series, by HENRY HOLT & Co., of New York. It is sold at \$1.35.

HOW THE FARM PAYS.—A handsome octavo volume of four hundred pages bears this attractive name, and by the title page we are informed it contains "the experiences of forty years of successful farming and gardening by the authors, W.M. CROZIER and PETER HENDERSON." It is published by PETER HENDERSON & Co., of 35 Cortlandt street, New York. In this volume a wide range of farm and garden topics come under consideration, and what is most peculiar in the work is the fact that it is nearly all in the colloquial style, a conversation being kept up between Mr. C. and Mr. H. A great amount of valuable and practical information is given, especially when the authors confine themselves to the statement of practices with which they have had actual experience; fodder crops, the care of cattle, and the raising of vegetables are the most valuable portions of the book. We regret that the authors should be so short-sighted as to deem it advisable to leave their own legitimate sphere in order to write a page or two derogatory to scientific agriculture and agricultural colleges. The intelligent farmer or horticulturist should be the last one to disavow, at this day, the benefits derived by agriculture from the labors of scientific men.

DRUGS AND MEDICINES OF NORTH AMERICA.—The third number of this serial, devoted to the medicinal plants of North America, appears with a

number of drawings of Caltha palustris and Hydrastis Canadensis, and the text consists of a full discussion of the plants in their various relations to botany, pharmacy, chemistry and therapeutics. The successive issues of this publication make it apparent that it is a valuable one in the interest of physicians and druggists, and should command a generous support. Published quarterly, at one dollar a year, by J. V. & C. G. LLOYD, 180 Elm street, Cincinnati, Ohio.

**THE BALL OF THE VEGETABLES.**—In our notice, last month, of this beautiful and interesting book of children's stories in prose and verse, by MARGARET EYTINGE, and published by HARPER & BROTHERS, the price was mentioned as three dollars; this was a mistake, the price of it is \$2.00. Those who purchase it will be pleased and satisfied.

### PRIZE ESSAYS FOR 1885.

The prizes offered for Essays, last year, resulted in the publication in our pages of some of the best thoughts on horticultural topics of persons practically engaged in the operations of which they wrote, and this kind of information is what is most needed. We again take this method of calling out the most valuable and reliable experience on subjects that will interest a variety of readers.

For the best well written article on each of the following subjects, we offer to pay in seeds and plants selected from our FLORAL GUIDE, the sums as respectively stated.

1. What agencies and methods can the residents of villages employ to secure the practical effects of the most advanced ideas of sanitation, and the proper horticultural embellishment of streets and grounds? Twenty-five Dollars.

2. How can the Rose be best managed as a house plant, and what varieties are most suitable for that purpose? Twenty Dollars.

3. How can Asparagus be best and most economically raised for market, and what are the details of cultivation, gathering, packing and marketing? Twenty Dollars.

4. Is the Blackberry a profitable fruit, and, if so, what varieties, and with what processes of cultivation and marketing? Twenty Dollars.

5. What varieties of Peas are most profitable for the market gardener, and what most desirable for the table, and what are the best methods of cultivation in each case? Twenty Dollars.

6. What practices can be most successfully employed to secure the Apple orchards from the codlin moth? Twenty Dollars.

7. Is the Mushroom, any where in this country, raised extensively for market, or can it be so raised to advantage, and, if so, in what manner? Twenty Dollars.

8. What salad plants are most desirable, and by what manner of cultivation can a family be best supplied with them from a private garden? Fifteen Dollars.

9. What annual flowers can be satisfactorily used in winter window gardening, and how are they best managed? Fifteen Dollars.

10. What is the best method of treatment in the propagation and cultivation of the Cyclamen to secure fine blooming plants? Fifteen Dollars.

11. How can the finest pot-plants of Chrysanthemums be raised, and what varieties are desirable? Fifteen Dollars.

12. How can amateurs without greenhouses keep up a winter supply of Violets and Pansies? Fifteen Dollars.

Competitors on the subjects relating to the Blackberry, No. 4, and annual flowers, No. 9, should send their manuscripts so as to be received here not later than the first day of January; all others should be here by the first of March. Committees of at least three persons each, selected for their competency as judges on the various subjects, will decide on the merits of all contributions and award the prizes.

The prize communications will in due time be published, and those not accepted will be at the disposal of the writers. Those wishing unaccepted articles returned will please so state, but any left in our possession will be examined, and anything of special interest will be published, giving the author credit. Announcement of prizes will be made immediately after the awards.

### BINDING THE MAGAZINE.

We will bind the MAGAZINE in nice cloth covers for 50 cents, and return the book, with the postage or expressage prepaid by us. If subscribers will send us the numbers in season, we will have the volume bound and returned, if possible, before the Christmas holidays. Please give your name on the package when sent, that we may know to whom it belongs. Those who may wish their own bookbinders to do this work will be supplied with cloth covers for 25 cents each.

### DO NOT DELAY.

During this month and the next the subscriptions for nearly all the periodicals in the country are made up. Now is the time to introduce to your friends VICK'S MAGAZINE; each subscriber will receive in addition a copy of *Good Cheer*, or he will be able to take advantage of our low terms to secure other periodicals, a full list of which appears in our advertising columns.

### SPECIAL TERMS TO AGENTS.

Parties desiring to act as agents in getting subscribers to the MAGAZINE will be given special rates on application. There is a chance for enterprising canvassers in this work, and it will be to the advantage of some one in every locality to send for our terms to Agents; Postmasters, especially, should apply.

### BOUNDED VOLUMES.

Bound volumes of this MAGAZINE make splendid and useful holiday presents. We can furnish volumes from the commencement—1878-79-80-81-82-83-84—for \$1.75 each, or the seven for \$10.50. We will prepay the express charges.

### VICK'S FLORAL GUIDE FOR 1885.

Our FLORAL GUIDE for 1885 will be ready to commence sending out in December, though it will be the middle of January before all are mailed. We design to send it to every subscriber, but if any should be accidentally omitted, please notify us by postal.

### NOT A BAD HOLIDAY PRESENT.

A subscription to our MAGAZINE would not be a bad holiday present. Our price is so low that we do not feel as though we were pleading our own cause when urging people to subscribe.

### A JOYFUL GREETING.

Hello! How are you? I am glad at last your eyes have fallen upon me. Now that we have met, pray cultivate the acquaintance, for it is my purpose to interest and to serve you. Between you and I, though only a newspaper article, I am ambitious. Having a portentous message for all mankind, if it be cordially received, its import truly realized and acted upon, I shall be considered a world's benefactor. Could have no higher ambition you will admit.

A misanthrope of ample means determined to end his life by drowning himself. Going to the banks of the canal, found the time not favorable for the purpose, a number of persons being in the vicinity, and daylight still present. He concluded to walk along the tow-path until it was dark. While doing so, he heard piteous cries issuing from the door of a hovel near by, and unconsciously walked over to the place, and found a poor family consisting of a mother surrounded by several children, who told him of their sufferings for food. He took from his pocket his wallet and handed it to the woman, reasoning with himself that he would not need it. The grateful thanks and praises that he received from the recipients of his bounty awoke emotion within his breast, of such a pleasurable character, that he changed his suicidal intent, and decided to live for others. His future life became replete with good deeds,—many a dark home and heart were made bright by his presence.

Well, my appearance in these columns, springs, simply from a desire on the part of those I represent, to benefit your news-devouring race. My province is to help you, your friends, your relations, aye, even your *mother-in-law*, if that interesting lady be not already far beyond the pale of good influences.

I am sent among men to bear tidings of a discovery that marks an epoch as important to the health of mankind as Newton's apple and Franklin's kite were to natural science. The sick, the discouraged, the dejected, the broken down, and the despairing, may now, all find a cure, certain as the Jordan proved to the Syrian leper. It is only necessary, as in the case of that sufferer of old, *to follow directions.*

The agent which I herald builds up the

system, sweeps the cobwebs from the brain, and sends pure, invigorating blood dancing through the arteries, to the music of happy laughter.

The gloomy, worn-out man of business, by proper use of this wonderful medicine, will be enabled to meet trouble and reverses *like a man*. Then, in perfect health, he will not have abnormal views of the "Vicissitudes of fortune, which spares neither man, nor the proudest of his works, which buries empires and cities in a common grave."

The weak and nervous woman, just able to drag herself, in "moping melancholy," through duties of the day, may steal the bloom from blush roses, and have eyes bright and sparkling as the dewdrops nestling in their leaves; and the poor little baby, now disfigured with pimples and scabby sores, may be made sweet, cool, and wholesome as—"that youngster of Mrs. Blank's, across the way, whose family is always in a glow of health." Don't you know the reason? "No." Then I will tell you. For years, your neighbor has *never been without* Dr. Pierce's Golden Medical Discovery.

This remedy is a medicine, not a beverage, and is to be taken according to full and perfectly plain directions accompanying each bottle. It is specific, but not a patent medicine, and contains no vile narcotics, or viler liquor. It is a prescription, used for years by the well-known physician, Dr. R. V. Pierce, of Buffalo, N. Y., whose name is a household word in innumerable homes all over our own and foreign lands. The Golden Medical Discovery is prepared and offered to the public by the World's Dispensary Medical Association, a body corporate, existing by and under the laws of the State of New York; its president is Dr. Pierce, the great specialist in chronic diseases. The doctor has devoted the best years of a very busy and wonderfully successful life to the relief and cure of his suffering fellow-men,—and at a time, when high political honors lay broadly open before him, Dr. Pierce resigned his seat in the Congress of the United States, simply from a sense of duty towards others. His associates in the great sanitarium represented to the doctor that the immense business of their Association demanded that his personal attention should be paid to the great army of patients crowding upon

them from every clime. Dr. Pierce is also the founder of the Invalids' Hotel, at Buffalo, N. Y. This establishment, possessing all the comforts and luxuries of a first-class American hotel, has in addition the daily attendance of a large faculty of eminent specialists, whose practice collectively cover the whole field of surgery and chronic diseases. The laboratory in which Dr. Pierce's Golden Medical Discovery is prepared is an object of interest and wonder. It has a frontage of one hundred feet, a depth of one hundred and twenty-five feet, and is six stories high. In this mammoth and palatial workshop two hundred persons are constantly employed in putting up Dr. Pierce's Medicines.

While the Golden Medical Discovery's curative effects are almost immediately felt, it is not merely a temporary stimulant, but it is as certainly a safe and complete cure, in all cases for which it is recommended, as it is that certain misery and death will follow their neglect. Dr. Pierce's Golden Medical Discovery *will not* cure club feet, will not refurbish armless or legless unfortunates with new and perfect limbs, and it is not guaranteed that even a dozen bottles applied to any stray portion of a second-hand skeleton, will develop such member into an animate, human form divine (?). In brief, it is not asserted that this medicine will, or can, counteract the decrees of Providence. But in all cases where a high state of civilization and cultivation has engendered disease and suffering, whereby God's natural man has become a nervous, artificial being, the Golden Medical Discovery *will positively* restore to him the strong, vigorous, self-asserting life, from which, almost unconsciously, he had drifted far, and perhaps hopelessly away. It is claimed, and guaranteed, if this medicine be used as prescribed, and faithfully persevered in a reasonable time, *it will permanently cure* liver complaint, and the various blood disorders consequent upon torpor of the liver, in all their various forms and ramifications, including bronchitis, consumption, which is scrofula of the lungs, dyspepsia, costiveness, sick-headache, skin dyseases, fever and ague, malaria, and other disorders arising from poisoned or deteriorated blood.

This wonderful medicine cures all humors, from the worst scrofula to a common

blotch, pimple, or eruption. Erysipelas, salt-rheum, fever-sores, scaly or rough skin, in short, all diseases caused by bad blood, are conquered by this powerful, purifying, and invigorating medicine. Great eating ulcers rapidly heal under its benign influences. Especially has it manifested its potency in curing tetter, boils, carbuncles, scrofulous sores and swellings, white swellings, goitre or thick neck, and enlarged glands. Consumption, which is scrofulous disease of the lungs, is promptly and positively arrested and cured by this sovereign and God-given remedy, if taken before the last stages are reached. For weak lungs, spitting of blood, consumptive night-sweats, and kindred affections, it is a sovereign remedy. For indigestion, dyspepsia, and torpid liver or "biliaryness," Golden Medical Discovery has no equal, as it effects perfect and radical cures.

To all suffering from lassitude, weariness, despondency, lack of vigor or ambition, be it man, woman, or child, Dr. Pierce's Golden Medical Discovery will speedily impart new tone, vigor and life to the whole system. The haggard face will grow round, ruddy, and beam with the expression of long lost confidence. The step will be firm and elastic, and the relieved sufferer will once more enjoy in common with fellow men that feeling of proprietorship in earth, air, and being, only fully realized by those in perfect health.

The Golden Medical Discovery will not make drunkards or opium eaters; on the contrary, any unfortunate, driven by trouble, adversity or inherited appetite, to the use of insidious stimulants, will find the Discovery of great assistance in efforts to break the chains binding him to a shameful and miserable existence.

Those feeling only "out of sorts," with no predominant symptoms, and who, if asked, would find it difficult to explain their sensations, will find a sovereign remedy in the Golden Medical Discovery.

Those who are irritable, petulant, or fretful, ever seeing the gloomy side of life; who imagine "the time is out of joint;" to whom life is a heavy burden, not a blessing; who think the whole world is arrayed against them, and anticipate calamity at every turn; to all such let this message be full of encouragement and joy—Dr. Pierce's Golden Medical Dis-

covery will radically cure them, when it will be found, to their lasting benefit, that life and the world have not changed, but that disease had thrown clouds of misery and woe about them, through which all things were seen, as "through a glass darkly."

Let no sufferer be discouraged because he or she has tried other medicines without benefit. In fact, these are the cases the World's Dispensary Medical Association particularly desire to reach through their Dr. Pierce's Golden Medical Discovery. *When all other medicines fail let this be tried*, and no one will be doomed to further disappointment.

The Golden Medical Discovery is a prescription of a physician with a wide-awake reputation and an honorable position to maintain. It is far beneath the dignity of Dr. Pierce to lend his name to any vile nostrum, or catch-penny preparation, whereby the public may be deceived. Having used his Discovery for many years in his unprecedented private practice, he is convinced it is indeed a specific in diseases mentioned. Desiring this marvelous cure shall benefit, not only those with whom he comes personally in contact, but that all mankind may be embraced in his grand plan for the amelioration of human suffering, the doctor, through the World's Dispensary Medical Association, earnestly and most confidently recommends his Golden Medical Discovery to the public at large, assured the most skeptical will be thoroughly convinced of its worth by a trial of a single bottle.

In stubborn, or long-seated affections, and where the bowels are very costive, the gentle, though certain action of the Discovery, will be more rapid and satisfactory by supplementing Dr. Pierce's Pleasant Purgative Pellets in small daily doses of one or two. These pills (the original and only genuine Little Liver Pills) are *purely vegetable*, sugar-coated, and very small, yet by the peculiar process used in their preparation, they possess the strength and virtue of larger and unpalatable pills. Pleasant Purgative Pellets will speedily remove all ill and disagreeable effects arising from over-eating or drinking, and are recommended as a cathartic, at all times, being perfectly safe, sure, and unattended by the gripping pains usually experienced in the use of purgatives less carefully prepared. Promptly resorted to, these little Pellets will radically cure indigestion, biliousness, and sick-headache, thus saving the patient from serious and lingering disorders. Dr. Pierce, the President of the World's

Dispensary, and his faculty of twelve skilled specialists, can be consulted by letter or in person in any case of chronic disease requiring either medical or surgical treatment free of charge. For those desiring more exhaustive information than can be imparted through correspondence the doctor has written a book, called "The People's Common Sense Medical Adviser, in Plain English; or, Medicine Simplified."

This work alone is a goodly harvest for an ordinary life, and stamps its author a profound scholar and a very remarkable man. The book contains nine hundred and twenty-two pages, illustrated with two hundred and eighty-six wood-cuts and colored plates, and makes plain as a, b, c, anatomy, physiology, *materia medica*, practice of medicine, hygiene, temperaments, psychology, etc.,—and answers in plain, easily-to-be-understood terms all questions that may arise within their range, especially those questions the would-be inquirer is deterred by fear, or modesty, from asking the family or other physician. That all may be enabled to acquaint themselves with matter so vital to health, happiness, and success, the price of this great work has been fixed at one dollar and fifty cents, post paid by mail to any address, while smaller and far inferior books, purporting to cover the same ground, have sold at five dollars a copy. It being the aim of the proprietors of the Common Sense Medical Adviser to reach not only the affluent, but also those in moderate, and even straightened, circumstances, the price of the work places it within the reach of all.

## Ladies' Manual of Fancy Work.

A NEW BOOK, giving plain directions for Artistic Embroidery, Lace Work, Knitting, Tatting, Crochet, Net work, and all kinds of fancy Needle work. Beautifully printed on fine tinted paper, and contains

### Over 400 Illustrations,

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Jennie June in her preface to this book, says: "The present volume does not pretend to furnish the theory or practice of the highest Needle work art, but it does aim to supply within its compass a greater variety of excellent designs—every one of which is useful, for dress or household decoration—than have ever before been gathered within the leaves of one manual."

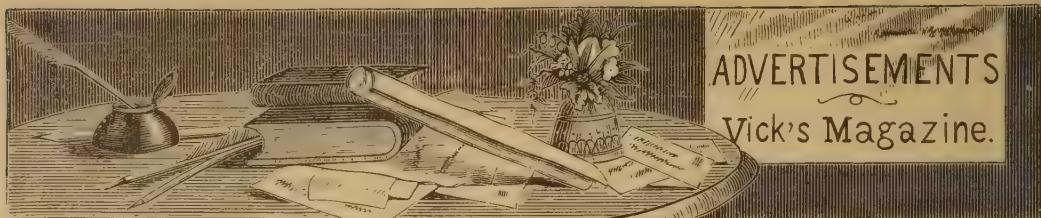
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# Worth Thinking Of.

## What Ayer's Cherry Pectoral does:—

It prevents the growth, to serious illness, of a dangerous class of diseases that begin as mere trivial ailments, and are too apt to be neglected as such. It alleviates even the most desperate cases of pulmonary diseases, and affords to the patient a last and the only chance for restoration to health.

It breaks up a cold, and stops a cough more speedily, certainly, and thoroughly than any other medicine. It spares mothers much painful anxiety about their children, and saves the little ones' lives. It cures all lung and throat diseases that can be reached by human aid.

## How Ayer's Cherry Pectoral Does Such Good.

It expels the mucus from the throat and the air passages of the head, and cleanses the mucous membrane. It allays inflammation, puts a stop to tickling in the throat and coughing, and enables the patient to rest. It heals sore throat, reduces the swollen tonsils, and restores natural tone to the affected vocal cords.

It soothes to natural and refreshing slumber, during which Nature regains strength to combat disease. It clears out and heals diseased air cells in the lungs, and helps Nature to repair the waste made by the corrosion of pulmonary disease. It puts a stop to the cankerous decay of Catarrh.

## Why Ayer's Cherry Pectoral is so Perfect a Medicine.

Because it is a scientifically ordered compound, of great potency, the product of years of study, observation, and experience in the treatment of throat and lung diseases. Because it is prepared from the purest forms of the drugs employed in it, chemically combined by a process of such perfection and accuracy as would be unattainable, even by the most skillful pharmacist, dealing with small quantities.

Because it is not only the most effective medicine for the uses to which it is designed, but, owing to the enormous quantities in which it is made, is sold at so low a price that it is placed within the reach of every household. Because it is an active curative agent, that must be taken by drops, as prescribed in the directions accompanying each bottle, and not a mere palliative syrup that may be swallowed by mouthfuls.

## Where Ayer's Cherry Pectoral Stands Before the World.

It is popularly known to be a medicine that has cured laryngeal, bronchial, and pulmonary affections where all others had failed. It is a favorite household remedy to-day with people whose lives were saved by it, when they were young, a generation ago. It has held the first-place in popular estimation for nearly half a century in this country, and is more and more highly appreciated, year after year, both at home and abroad.

It evokes daily, from all over the world, expressions of gratitude for lives saved by its use. It is everywhere recommended by reputable druggists, who know, from conversations with their patrons, and from their own experience, how almost magical are its effects for good. It is regularly prescribed by many physicians of the best standing, and is recommended by Professors of Medical Colleges, to their students, as invaluable for all diseases of the throat and lungs.

# Ayer's Cherry Pectoral,

PREPARED BY

Dr. J. C. Ayer & Co., [Analytical Chemists] Lowell, Mass.

Sold by all Druggists; Price \$1, six bottles for \$5.

moderates, as by this means there is a more continuous growth, and healthier plants are obtained, which are less liable to run to seed. As soon as the ground is workable in spring a liberal dressing, and a barrowful over, of well rotted farm-yard manure should be spread on the ground intended for early Cabbage, and at once plowed in. I do not think the practice a good one, though much in vogue, of putting the manure on the land during the winter, for the melting snow and the spring rains wash much of its most valuable properties into the drains, and when the plant comes to want these very things, it finds them not, in fact, scarcely anything is left save the organic parts of what once was rich in minerals, salts and phosphates. Let the manure be carted straight from the heap, and spread and plowed in at once, and the plant can draw from it all the season. After the plow, follow with a well weighted harrow, so as to thoroughly pulverize and mix the soil; do this thoroughly, as soil that is well worked in spring is much less liable to bake on the surface afterwards, and the sun and air permeates it to a much greater depth, and there is a more rapid and healthier growth, and as a natural sequence, earlier and finer Cabbage.

The lines can be marked off two feet apart, and the first dull or wet day the plants put out about eighteen inches apart, being about eight thousand to the acre, which ought to sell for from two to three hundred dollars. While the plants are growing, the cultivator should be run between the rows at least once every fourteen days, and the hoe between the plants as often as possible. Never let the weeds get more than an inch high, as a man can get over more ground then in one hour than he will in half a day a week or so later on, and there is no crop likes the ground stirred oftener than the Cabbage. Early in June run the double share plow down the center of each row after the cultivator, and your early Cabbage will require very little more attention.

Late Cabbages are generally sown out of doors, in April and May, but I am not an advocate of this practice, as the Turnip flea is then very plentiful, and although a good enough number of seedlings may be nursed up by the aid of smoke and soot, yet they very seldom escape scot

free. A much better plan is to sow in one of the frames that the early Cabbage were taken from, and cover with the sash or anything until such time as they attain their second leaf, when they may be dusted with soot, and the flea defied; but sow very thinly so as to get short, stocky plants, and if they come up too thick thin out and transplant, and half an hour spent this way will be well repaid in the future well being of the plants.

The sorts I favor most are French Ox-heart, Mammoth Marblehead, Excelsior Flat Dutch, Large Late Drumhead, Drum-head Savoy and Red Dutch.

As fall Spinach and early Potatoes will be cleared away in June and July, the land they occupied may receive a heavy dressing of manure and be plowed deeply, and then be broken down with a good harrow, and furrows run two or three inches deep, and three feet apart across the plat; take advantage of the first favorable day for planting, and set your plants at least two feet apart in the bottom of the furrow; after this do not neglect the cultivator and hoe. The plants being in the bottom of the furrows get the advantage of the rainfall, which is only limited in July and August, and the hoe and cultivator gradually filling in the soil gives them a deeper roothold, and they are less liable to flag or get a check in growth in the hot, dry weather. Toward the middle of August they will be ready for earthing up, which can be done by the double share plow as before.

As soon as the white butterfly, *Pieris (Pontia) Brassica*, begins to make love over the Cabbages, take the first dewy morning and sprinkle all the plants liberally with wood ashes; this will not only destroy the caterpillars but will also help the crop by supplying potash and bicarbonate of lime, and as often as the caterpillars are noticed at work take half an hour or so in the morning and go over the Cabbage plat with a box of wood ashes and give them a dose. In land deficient in lime the wireworm and white worm sometimes attack the roots, causing a collapse of the whole plant; when this is noticed, lime water with a little flour of sulphur will exterminate them. Clubbing at the root very often proceeds from careless planting, doubling up the roots instead of making the hole deep and large enough to admit of its going

straight down, thereby causing a stoppage of sap, a consequent swelling or tumor which develops into what is called club-root; therefore, a little extra care in planting will very frequently obviate this evil altogether.

The best mode I have found of storing Cabbage for winter and spring, is as follows: When it is deemed advisable to store the Cabbage, pull them up and turn their heads down for a day or so to drain all moisture from between the leaves, then remove all decayed and superfluous leaves, and put them three



STORING CABBAGES IN PITS.

or five deep, roots inward, in this form, about one hundred in a pit. Then cover with six or eight inches of soil, not less, for with a light covering they are too susceptible to atmospheric changes, and sudden thaws are very injurious to the sound-being of the crop. When wanted for market a whole pit can be taken at once, hence my reason for recommending small pits; they keep better and are more manageable, for I have found when a pit is broken into and the air let in, the Cabbage never keep so well after.—W.M. HY. WADDINGTON.

#### THEN AND NOW.

A few years since house plants were a rare sight, but now the dwelling which does not boast of at least a few specimens is rarely to be found. The Jerusalem Cherry, Chrysanthemum, and a species of Opuntia, called Prickly Pear, were three of the most prominent plants in the collections possessed by our mothers, judging from tradition, but one cannot wonder that the over-worked women of the last generation did not cultivate plants very extensively, when we consider how defective were the means

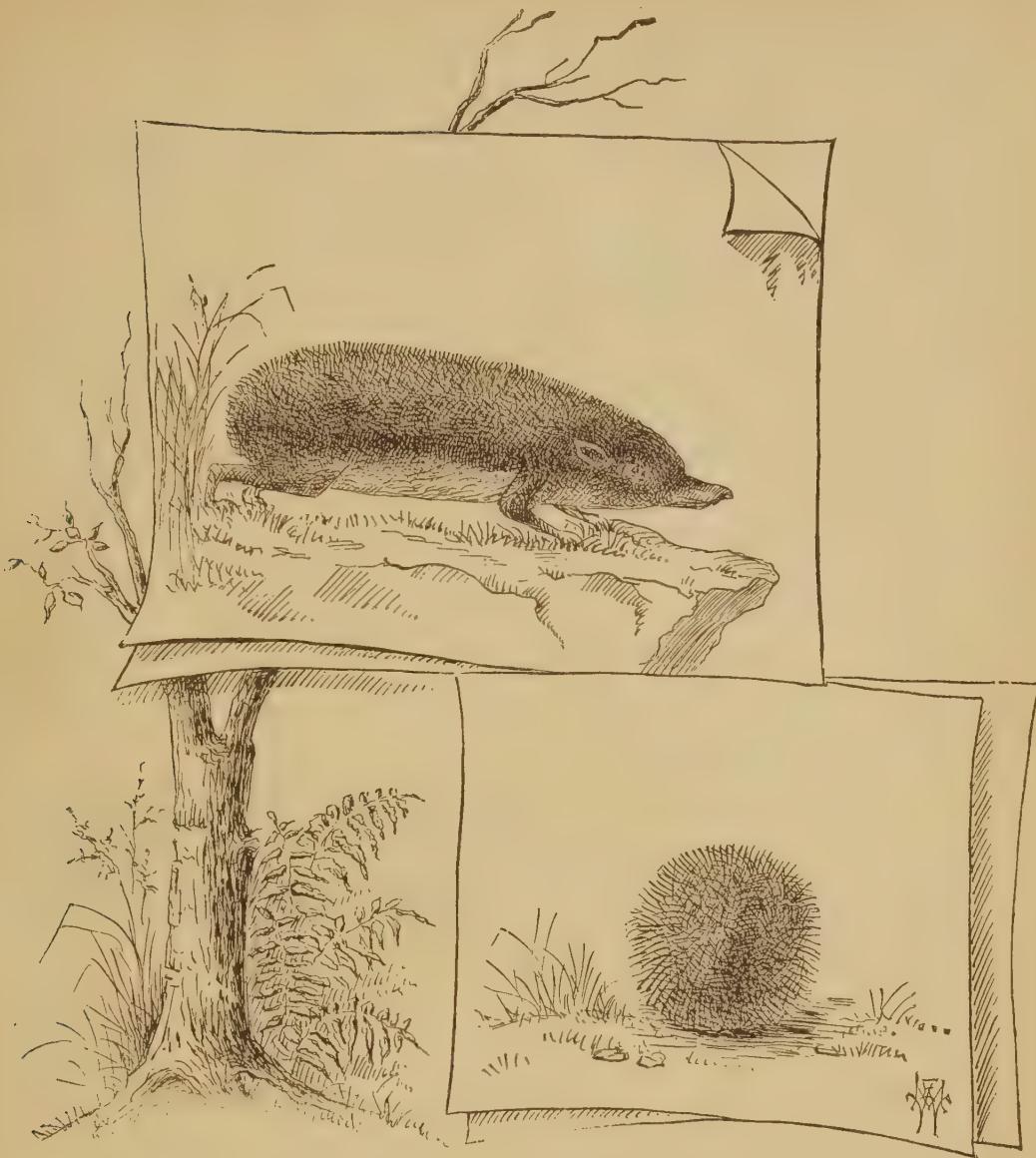
used for heating houses in their day, the main reliance being placed on a large stick of wood placed in the stove or fireplace at bed time and left to smolder through the night, or go out and leave the room in icy coldness, as fate might decide. Another refuge for those who would cling to their house plants through the difficulties which beset them was the cellar, but as this was often almost, if not entirely without light, the poor plants, with the exception of the few which required rest, must have had a very indifferent time, indeed. To-day, thanks to coal stoves and other facilities for keeping warm, and perhaps to an increasing love for the beautiful, almost every home has a window brightened by growing plants, when every thing without is shivering under its mantle of snow. Even pater-familias takes a certain degree of pride in those household ornaments, and the man who would rather have a hill of Potatoes than all the house plants that ever were raised is, we hope, fast disappearing from the land, or merging into the individual who will actually purchase a plant from the itinerant gardener and carry it home to his wife as a pleasant surprise. Let us hope that as homes are made brighter and more attractive, children will be less tempted to leave them, and that even the once despised house plant may be recognized as a humanizing agent.—L.

#### CHICAGO MARKET POTATO.

The Chicago Market Potatoes that I bought of you, last spring, have yielded wonderfully for this section. From twenty pounds planted in ordinary land, and without extra cultivation and without manure, I dug five hundred pounds of good, sound Potatoes. I have tried some and consider them a good eating Potato. I expect to plant no other, next season.—E. A. W., *St. Albans, W. Va.*

#### ALOCASIA ODORATA.

This is a fine plant for the lawn in summer and for the house in winter. I have one seven feet high, with broad leaves from twenty to thirty inches long. It had blooms during the past summer, but it would be better if it never bloomed, as it spoils the shape of the plant. The blossoms are the shape of a Calla, but green, with a sickening odor.—N. W., *Zionsville.*



### A CURIOUS BALL.

There lives a queer little animal called the Hedge-hog, not at all prepossessing in appearance, but so wonderfully constructed that he is an object of interest.

He has a long muzzle, short neck, and legs, and he bears on his back what may be called a coat of armor.

This is a thick covering of strong bristles or spines, and beneath the skin is a powerful muscle which the animal can contract or expand at pleasure.

When contracted the little creature is rolled up in the shape of a prickly ball. This is the method he uses to protect himself on the approach of an enemy, and he will even run toward a high hedge from which he drops a distance of many feet. Instantly he rolls himself in a ball,

from which the spikes stand out thickly on all sides. These are so elastic that he is not harmed by the fall, and after a moment or two he resumes his former shape and runs off as briskly as possible.

The summer is his time for activity, and he then subsists on reptiles of various kinds, also birds and beetles.

At the approach of winter he seeks a snug home for himself beneath the root of a tree where he builds a soft nest of leaves and moss. In this he goes to sleep, and a long nap he takes, for through all the cold, frosty, winter weather he is in a state of torpidity, requiring no food, for beneath his skin a layer of fat is formed during the summer, and this serves for warmth, and nourishment, as it is gradually absorbed through the long winter.

His prickly coat he uses for defence, as he has the power of bristling the quills out in every direction, and holding them in this position, thus rendering himself so fierce looking a foe that he is not a pleasant subject to attack.

There are also Hedge-hogs of the sea, or Sea Urchins, as they are oftener called. These too, are prickly coated balls, but they never change their shape, as they are always round.

When the shell, washed by the sea, and freed from its bristles, is cast upon the beach, it is a beautiful thing to examine, for it is the daintiest of white balls, slightly flattened at each end, and has the appearance of being most exquisitely carved.

Both truly are curious balls, the Hedgehog of the land, and that of the sea, and their homes, and habits so different; yet each one has its own work of usefulness which it faithfully performs.—M. E. WHITTEMORE, *New York.*

#### PRIZE ESSAYS.

In our November number we announced twelve subjects for prize essays; the time for receiving four of them has already expired. Two are published in this number, and as may be noticed, both are by our esteemed correspondent Wm. H. WADINGTON, of Toronto, Ontario. There were several competitors for both essays, but the decisions were unquestionable fairly made, and by different committees without each others knowledge. We congratulate the writer and our readers, and trust we may continue to have the benefit of his valuable experience on kindred subjects.

The prizes for the other subjects are still open for competition and are as follows:

3. The cultivation of Celery
5. How can Apples be profitably raised.
6. Planting and management of Grape vines in the family garden.
7. The cultivation of the Strawberry for market.
8. The construction, planting and management of a cold Grapery.
9. The construction, heating and management of a small conservatory.
11. Is irrigation for gardens and small fruit crops of any particular value in that part of the country east of the Mississippi?
12. What root crops can be raised with profit for feeding cattle, and how?

The examination of the various communications will be made by competent persons having practical knowledge in regard to each subject, and the decisions will be based entirely on the merits of the writings, but statement of personal experience will in all cases be considered essential.

The prize communications will be published in the MAGAZINE. Those not accepted will be at the disposal of the writers, and if they are desired to be returned stamps will please be sent for the purpose. Unaccepted communications left in our possession will be examined, and anything new or of special merit will be published, giving the authors credit.

A prize of \$25.00 in Seeds and Plants, selected from our Catalogue, is offered for the best well written article, embodying personal experience, on each subject.

Competitors should send manuscripts to reach us by the 20th of February.



**AUSTRALIAN SEEDS.**—The director of the Botanic Gardens at Melbourne, Australia, Mr. W. R. GUILFOYLE, who so kindly sent us last Spring a collection of seeds of Australian and New Zealand plants, has again conferred a similar favor. A short time since we received from that source a package containing eighty different species of seeds of ornamental plants. The seeds were accompanied by a copy of the Catalogue of plants under cultivation in the Melbourne Botanic Garden, alphabetically arranged by W. R. GUILFOYLE F. L. S., C. M. R. B. S., London Director. With plans and illustrations it is a large and closely printed volume, containing much valuable information for the general plant student, as well as for those it is more directly intended for. From an estimate we think about 9000 plants are noticed, and in regard to these we are informed in the introduction that "an exhaustive work is in course of preparation which will embody a summary of each order, with the history, properties, and uses of its more remarkable plants."

As we distributed the seeds received from Melbourne last year among our readers, so these are offered to any who may apply for them. A few varieties will be sent to each applicant. As they are nearly all from plants requiring green-house cultivation only those having proper facilities to rear them should apply for them. To all such they are freely offered.

**THE WEATHER.**—ROBERT CLARKE AND Co., of Cincinnati, have issued a very excellent pamphlet by S. S. BASSLER, on the above subject, showing the Signal Service system of foretelling weather. It is well illustrated, and is sold at twenty-five cents a copy.

## THE ORIGIN OF MANY CHRONIC DISEASES.

Their Common Sense and Successful Treatment. By R. V. PIERCE, M. D., Author of the "People's Common Sense Medical Adviser," (over 900 pages, nearly 300 illustrations, price, \$1.50 post-paid,) and Founder of the World's Dispensary and Invalids' Hotel, Buffalo, N. Y., with branch at No. 3 New Oxford Street, London, England.

The importance of the function performed by the liver, as a blood-purifying and excretory organ, can scarcely be over-estimated. The foul and poisonous matters discharged into the blood, in the form of worn-out and noxious elements, are absorbed therefrom by a healthy liver, and rendered harmless by being converted into bile. When the liver becomes congested, torpid, or otherwise diseased, it fails to perform this important function, and various diseases result.

**HEART DISEASE.**—The blood, surcharged with daily accumulated poison, as the result of torpor of the liver, unduly stimulates the nerves of the heart, and produces chronic irritation, palpitation, or undue excitement of that organ, developing many forms of heart disease.

**DYSPEPSIA AND COSTIVENESS.**—The stomach and bowels cannot escape becoming affected, as a direct result of liver disease, and *costiveness, piles, dropsy, dyspepsia, diarrhea*, and many other forms of chronic disease, are among the natural results.

**SICK HEADACHE.**—The brain is unduly stimulated by the unhealthy blood; hence, dullness, dizziness, sick-headache (really only another name for bilious headache), sleepy or nervous feelings, gloomy forebodings, and irritability of temper.

**SKIN DISEASES.**—The blood-poison, not being worked off by the liver, when that organ is diseased or sluggish, accumulates, and filtering through the skin, becomes so acrid as to produce blotches, pimples, eruptions, pustules, scaly incrustations, lumps, inflamed patches, acne, impetigo, prurigo, psoriasis, salt-rheum, tetter; or, becoming still more virulent, the poison breaks out in boils, carbuncles, ulcers, or old sores, that are difficult to heal.

**SCROFULOUS DISEASES.**—A long series of diseases, commonly known as scrofu-

lous, is caused by torpor of the liver—the want of proper excretion of the poisonous, festering matter, circulating in the blood. These cause swellings about the neck, enlarged tonsils, scrofulous sore eyes, running ulcers, discharges from the ears, catarrh or ozæna, feversores, white swellings, hip-joint disease, ulceration of bones, internal swellings, ulcerations of the liver, kidneys, and womb, and other maladies too numerous to mention.

**CONSUMPTION.**—The bile-poisoned blood, resulting from faulty action of the liver, passes from the upper and right cavity of the heart to the lower cavity, thence directly to the lungs, circulating through all parts of these most delicate organs. The tissues of the lungs are poisoned and irritated, and thus invite the scrofulous humors with which the blood is burdened. In this way, consumption, which is scrofula of the lungs, so defined by all the most scientific authors, is established.

**MALARIAL POISONS,** which are absorbed from the atmosphere taken into the lungs, are eliminated or rejected from the blood, by the liver, when this organ is in good condition, but when it fails in such performance, the system suffers from *chills, fever, dumb ague, congestive chills*, and other phases of *malarial poisoning*.

**THE SYMPTOMS OF LIVER DISEASE** and its resultant and kindred affections may differ according to the circumstances, aptitude, temperament, age, or constitutional weaknesses of the individual and the complications of the disease and its stage of advancement. Not unfrequently the complexion becomes pale and sallow, and there is puffiness under the eyes, bilious or sick-headache, bitter taste in the mouth, tongue coated white or covered with a brown fur, hacking cough, fever, restlessness, sometimes an unnatural greasy appearance of the skin, at others it is dry and harsh, has scaly or branny eruptions, pimples, dark blotches, and troublesome itching. The urine is frequently scanty and high-colored, but variable as to quantity and appearance; it often produces a scalding sensation when voided, and, if allowed to stand, deposits a sediment. There is depression of spirits, and a decided tendency to be discouraged and despondent. The functional powers of the stomach

are impaired, there is loss or irregularity of appetite, uneasiness in the region of the stomach, oppression, sometimes nausea and water-brash, or indigestion, flatulency, and acid eructations; the bowels become irregular, usually constipated, and occasionally subject to obstinate diarrhoea, attended with colicky pains, the stools are light clay-colored, sometimes hard and dark, again thin and very offensive. During the day, the circulation is sluggish, the feet and hands are cold, but at night the pulse is accelerated, and the palms of the hands and the soles of the feet have a burning sensation. The foregoing symptoms are not all present in any one case, nor are any two cases alike in every respect.

**COMMON SENSE.**—We appeal to the reader if it is not reasonable to suppose that all these maladies that can be clearly traced to a common origin or cause should be cured by the application of a remedy known to remove such cause? All these several divisions of maladies are many times treated as if entirely unlike in their nature and demanding different classes of remedies, according to the peculiarity of symptoms manifested. The writer, nevertheless, confidently asserts that *all the diseases named in this article* can be and are constantly cured by the use of a potent alterative or blood-purifier and liver invigorator. The active remedial properties of the most efficient agents now known of the above classes of medicines are scientifically combined in "Golden Medical Discovery," which acts especially upon the liver, and through that organ upon the blood, cleansing and invigorating the system generally.

**GOLDEN MEDICAL DISCOVERY** does not debilitate the liver by over-stimulation, nor irritate the stomach and bowels by disturbing the delicate processes of digestion, neither does it act with severity upon the blood; but it operates so gently, insensibly, and yet with so much certainty, that it excites the surprise and admiration of all who use it.

If the bowels are unusually sluggish, chronic constipation) it is advisable, in conjunction with the "Discovery," to use **PLEASANT PURGATIVE PELLETS**, which are powerfully alterative, besides being mild, gentle, and unirritating, in their operation. They are the natural allies—

remedial assistants—of the "Discovery," and the two work harmoniously together. They should be taken in small doses, and their use perseveringly followed until the bowels are properly regulated.

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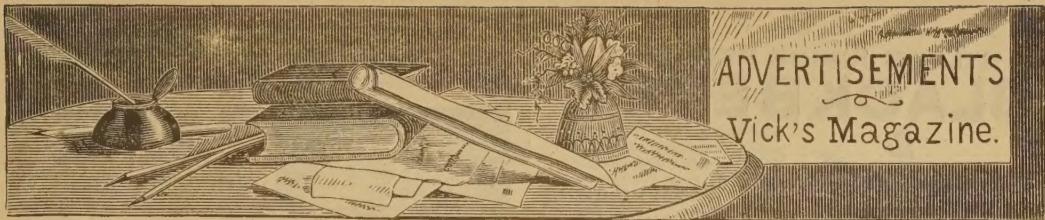
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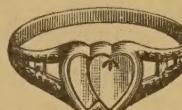
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